Medical Li... SEP 22 1927

HYGEIA

THE HEALTH MAGAZINE

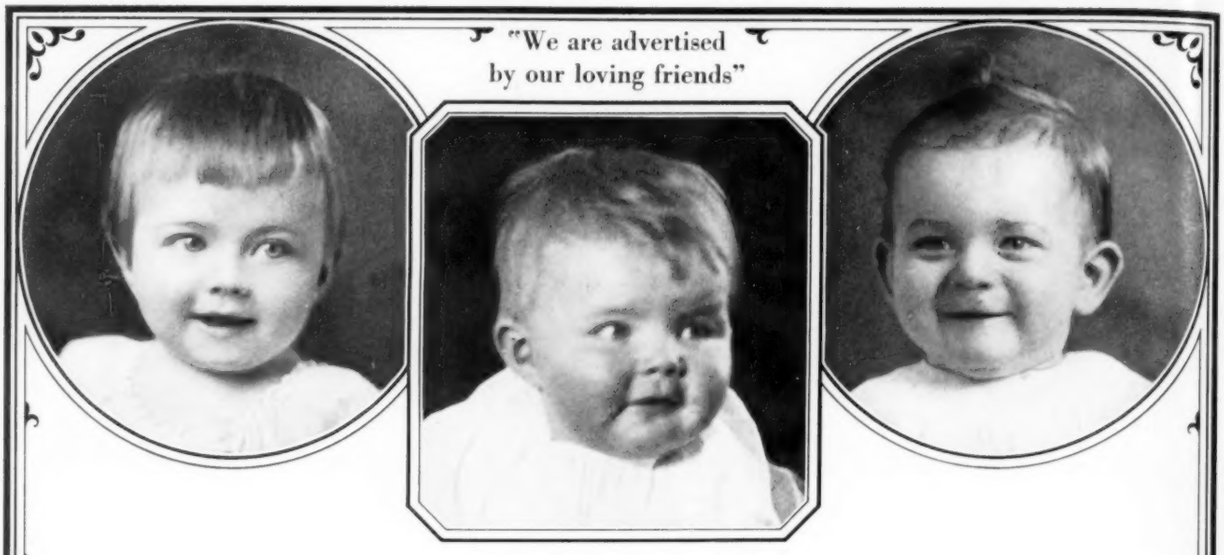
Published by the American Medical Association

The Stupid Child

Better Breakfasts

October, 1927 *SCHOOL NUMBER* *25 Cents*

"We are advertised
by our loving friends"



Mellin's Food—A Milk Modifier

The nutritive elements in Mellin's Food are readily digested and these nutritive elements act as a modifier of cow's milk in a manner to assure the digestion of the milk curd and to favorably affect the digestibility of the fat of the milk.

Mellin's Food furnishes carbohydrates in the form of maltose and dextrins, readily available for all purposes of this indispensable food element.

Mellin's Food contributes protein in cereal form, and also supplies mineral matter consisting of potassium, calcium, sodium, magnesium, phosphatic salts and iron.

Mellin's Food and cow's milk satisfies the desire for food and meets the nutritive requirements for growth and development by furnishing nourishment appropriate to the baby's digestion and assimilation.

The Weaning Period

Include Mellin's Food Biscuits in the selection of solid foods when it becomes time to wean the baby from the bottle.

Mellin's Food Biscuits

contain a large proportion of Mellin's Food. They are attractive in appearance, very tasty, easily digested and especially suitable for nourishment during the weaning period.

A sample box of these delicious biscuits will be sent, postage paid, upon request.

Mellin's Food Company, 177 State Street, Boston, Mass.

HYGEIA, the Health Magazine, is published monthly by the American Medical Association, 535 North Dearborn Street, Chicago, Ill. Yearly subscription price, $3.00; for foreign postage add 50 cents. Volume 5, Number 10. Entered as second-class matter March 21, 1923, at the postoffice at Chicago, Ill., under the Acts of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1,103, Act of October 3, 1917, authorized March 21, 1923.

HYGEIA

THE HEALTH MAGAZINE

Published by the American Medical Association
535 North Dearborn Street, Chicago

VOLUME 5 — OCTOBER, 1927 — NUMBER 10

CONTRIBUTORS TO SCHOOL NUMBER

A nursery school near the home of RUTH L. FRANKEL in Philadelphia first led her to make a study of this new movement in education. RUTH PECK MCLEOD, who argues for better breakfasts, has written extensively on the subject of nutrition. DR. MAHLON ASHFORD, a prominent Baltimore surgeon, writes on high blood pressure and suggests means of avoiding it.

Investigating false and extravagant claims of all kinds of cures is the principal activity of DR. ARTHUR J. CRAMP, director of the bureau of investigation of the American Medical Association and a member of the editorial board of HYGEIA. DR. FRED N. MILLER, as staff physician of the University of Oregon, is well qualified to write on the health of college students.

DR. W. A. KERRISON, a dentist of Wilbur, Wash., shows that it may be necessary to consult both dentist and physician if the teeth are seriously decayed. DR. PHILIP M. STIMSON, as chief of the children's section of a large clinic in New York City and instructor in diseases of children at Cornell Medical College, has had wide experience with growing boys.

WALTER BÉRAN WOLFE is a psychologist of note, associated with Alfred Adler of Vienna as an editor of an international journal of psychology. MISS L. L. FERARD is a lecturer for the British Red Cross.

CONTENTS

COVER DESIGN
Edwin L. Dahlberg — PAGE

FRONTISPIECE—HEROES OF AMERICAN MEDICINE.. 486
VI. Elihu Hubbard Smith

THE PROS AND CONS OF THE NURSERY SCHOOL... 487
Ruth L. Frankel

FORESTALLING THE ANNUAL WINTER COLD..... 489

BIGGER AND BETTER BREAKFASTS..... 490
Ruth Peck McLeod

BIRTHPLACE OF WALTER REED..... 492

HIGH BLOOD PRESSURE..... 493
Mahlon Ashford

GUARDING AGAINST INFANTILE PARALYSIS..... 496

SOME BALD FACTS..... 497
Arthur J. Cramp

OFF TO COLLEGE!..... 500
Fred N. Miller

WHAT MAKES OUR TEETH DECAY?..... 503
W. A. Kerrison

THESE MOTHERS WROTE BEST LETTERS..... 504

GROWING BOYS..... 505
Philip M. Stimson

THE STUPID CHILD..... 508
Walter Béran Wolfe

HEALTH RULES FOR GIRLS WHO WORK..... 510

THE COUNTRY DOCTOR..... 511

HOW THE WORLD GETS ITS DRINKING WATER... 512

THE UBIQUITOUS WASHCLOTH..... 514

THE PERILS OF BABYHOOD IN JAMAICA..... 515
L. L. Ferard

HOW FAR DO YOU WALK IN A DAY?..... 516

HOW YOUR EARS KEEP YOU STRAIGHT..... 517
Donald A. Laird

SIMPLICITY IN HEALTH TEACHING..... 519
Maud A. Brown

PLAIN FACTS ABOUT HEALTH AND DISEASE:
Health News of the Month..... 524
American Education Week..... 525
Changing Aspects of Human Disease..... 526
Skimmed Sunshine..... 526
Modified Birth Weight of Babies..... 527

THE KEY TO HEALTH (CHILDREN'S PLAY)..... 528
S. B. McCready

NEW BOOKS ON HEALTH..... 531

NEWS AND VIEWS..... 532

QUESTIONS AND ANSWERS..... 537

Health teaching successfully correlated with school work is described by MAUD A. BROWN, director of a child health demonstration under the auspices of the Commonwealth Fund at Fargo, N. D. DONALD A. LAIRD, Ph.D., is director of the laboratory of psychology at Colgate University.

S. B. MCCREADY is assistant director of the Junior Red Cross of Canada, with headquarters at Toronto.

Copyright, 1927, by the American Medical Association. All rights reserved.

Yearly subscription price, $3.00; for foreign postage add 50 cents.

HEROES OF AMERICAN MEDICINE

VI. Elihu Hubbard Smith

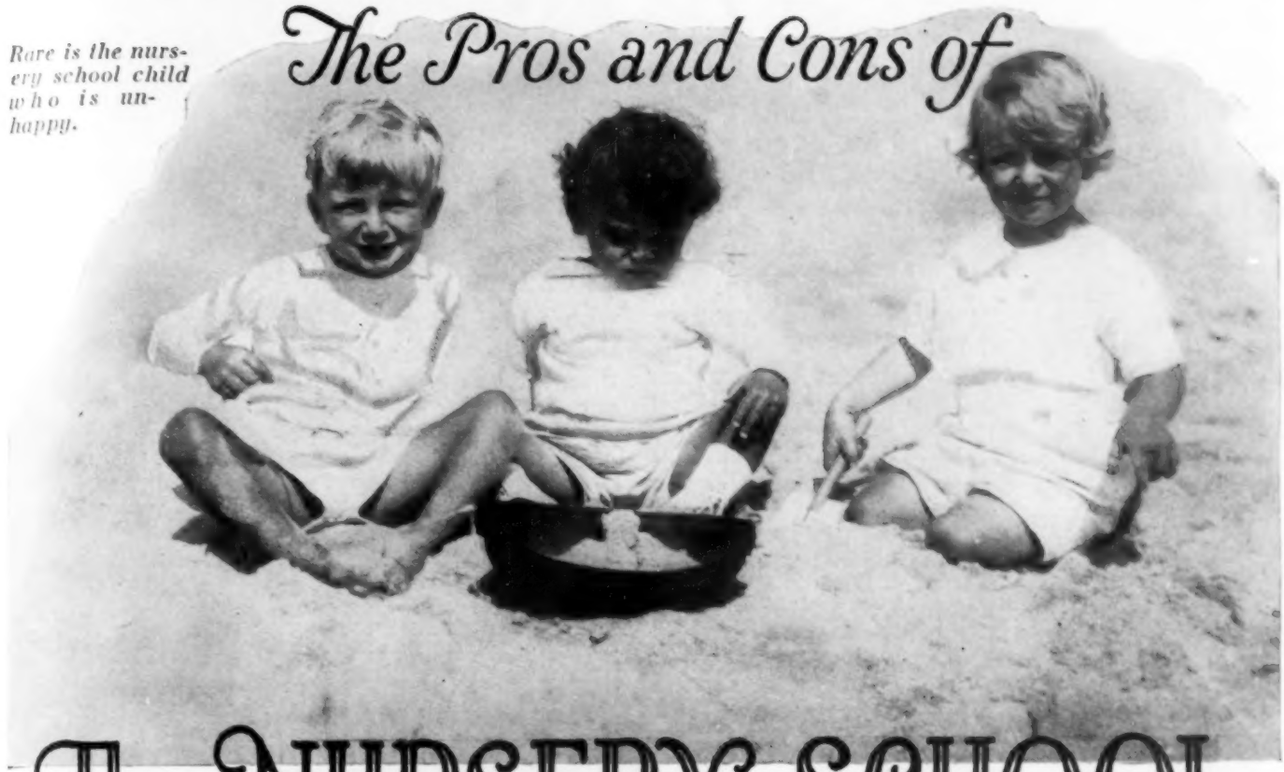
ELIHU HUBBARD SMITH, born in Litchfield, Conn., in 1771, was the son of a physician named Reuben Smith, and Abigail Hubbard, the daughter of a well known Connecticut family. The younger Smith entered the College of New Haven in the class of 1786, when he was 11 years old, and passed through his course with the highest honors, specializing in languages. However, he had planned early in life to follow his father's career in medicine, so that from the time he was 15 years old, when he graduated, until the age of 20 he studied and worked with his father.

In 1791 he entered the newly established University of Pennsylvania, where he became the warm friend of Benjamin Rush and where he received his medical degree in 1792. Then at the age of 21 he began practicing medicine in Connecticut with but little success and after a year moved to New York City. During the five years in which he lived in New York, before his death, he built up a reputation, established the first American medical periodical, known as the New York Medical Repository, and developed the thought of a great American medical organization that would eventually be the basis of an organization of medical men throughout the world.

Smith was a poet, the author of several dramas, some essays on philosophical subjects and numerous medical contributions. In 1798 he labored earnestly in the New York Hospital and among his patients, combating an epidemic of yellow fever. Finally he invited a friend who was ill to stop in his own house, and having himself become infected with the disease, died of it.

One of Smith's closest friends said, "The love of science and the impulse of philanthropy directed his whole professional career and left little room for the calculations of emolument."

Rare is the nursery school child who is unhappy.



The Pros and Cons of The NURSERY SCHOOL

By Ruth L. Frankel

PARENTS that follow every new phase of education are now busily engaged in watching the development of nursery schools. These new scholastic groups, already a part of the English public school system, and largely experimental in various American cities, have undoubtedly solved a definite need for many homes and are worth observing.

Teaches Child Social and Health Habits

The nursery school takes children from 18 months or 2 years upward to kindergarten age and gives them complete training in social and health habits. In its proper form it gets the babies early in the morning, provides all their meals, teaching them by group participation how and what to eat, supervises their play—much of it outdoors—and their relationships to one another, settles them in their cribs for the after dinner nap, and restores them to their homes at bedtime.

The ideal nursery school is equipped with small tables and chairs, specially constructed miniature toilets and washstands and low furniture of all sorts, made on a scale in which the child is perfectly at home. Everything is within reach, simple, durable and touchable. It is a perfect child world, wherein the child has a freedom rarely accorded in his own home.

The school takes a group of little folk and teaches them by actual experience how to be social animals and how to care for themselves. By 4 the child so trained has acquired spontaneously and unconsciously many of the habits that the isolated child in the home is still struggling and fighting over. Spinach, for instance, eaten in a group, is rarely either as distasteful or as interesting for dramatic purposes as when a devoted mother and nurse make it and the child the daily center of a thrilling emotional scene. The children learn the business of eating much more readily in the nursery school just because eating is merely routine. Even the little babies respond to group suggestion. What every one else is doing must be all right and when no one gets excited or thrilled or annoyed whether one eats or not, hunger and appetite assume their normal places in the child world.

Good Manners Emphasized

Similarly, clean hands, the proper use of handkerchiefs, good manners and low voices are automatically built into the response patterns when every one in the child's world does

the same thing at the same time. And since in the well-run nursery school a graduate dietitian plans the meals, a carefully prepared teacher supervises the play, and a trained nurse is frequently in attendance, it follows that here is an ideal environment. Most of the day the children are kept in the open air, even for naps and work periods, and rare is the child who is unhappy.

Better than Nurse or Governess

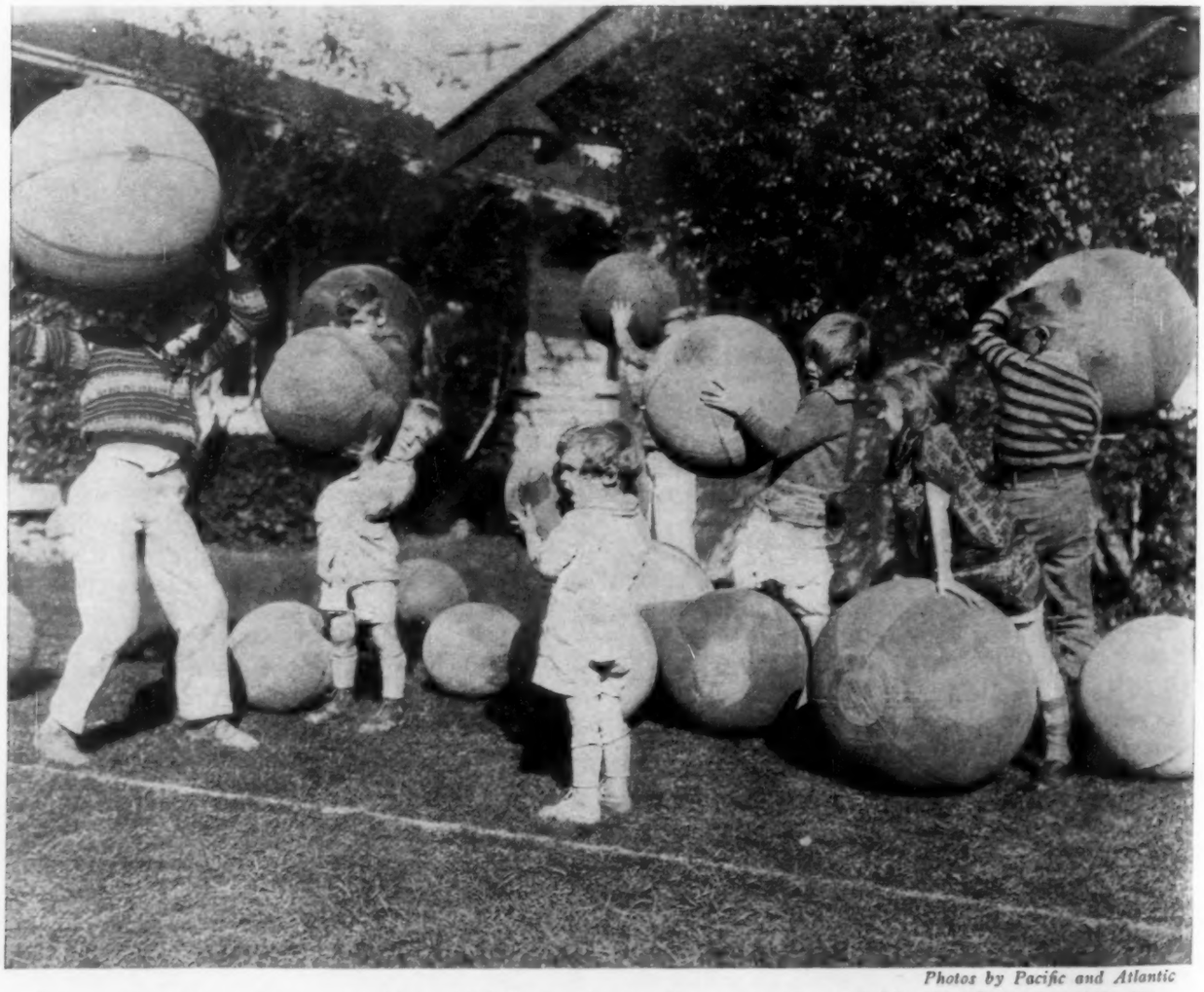
Any mother, who for one reason or another, must delegate most of her child's hours to the supervision of nurses, governesses or any one other than herself will find a nursery school offering the most satisfactory solution of her problem. Of course all nursery schools are not as good as they might be, but the general plan is the same and any one provides elements that no hired child's nurse can hope to give, teaches lessons no governess concerns herself with, and provides the valuable companionship of other children.

For the mother who lives in a section of the city that makes the city streets her child's daily playground and who can share her child's outdoor play only in that time she can spare from numerous household duties, again the nursery school is ideal. For it offers the child a perfect environment, safe outdoor play and proper supervision at all times.

All mothers who feel for any reason that they cannot give most of their best efforts to training and watching the runabout are fortunate if they have access to a good nursery school. Mothers who work from either necessity or choice, those whose daily household routine is absorbing, those who are nervous or impatient or who find themselves unable to struggle with the ceaseless energy of the toddler will ultimately find the nursery school a haven of peace.

When Home Training Is Better

But any mother who has leisure to devote to her child, who lives where porches and open space for safe playing are available, who has intelligence enough to deal herself with her child's problems is relinquishing a precious privilege rather than following the only course when she sends her child to nursery school.



Photos by Pacific and Atlantic

Frequently there are enough older children in the family or in the neighborhood to furnish the 2 year old with more than adequate companionship.

The college-bred woman, the former teacher and the hosts of intelligent mothers need not feel utterly inadequate to cope with the problem of habit training. Often these mothers, living in suburban homes, with help in the ordering of their households, pause in bewilderment and wonder if their children's best interests demand complete separation from home in favor of the nursery school. I, as a mother, feel that they do not, and that in this early separation both mother and child lose a precious opportunity for being together and thereby forming valuable home associations.

Can Duplicate School Training in Home

Except for the companionship of a group of contemporaries there is nothing in the nursery school plan that cannot be easily duplicated in the home if the mother has intelligence enough to try it.

Habit patterns may always be formed at home, regular routine may be equally the baby's portion, and a sunny outdoor porch with a box for playthings may furnish the necessary material for training small fingers and letting the youngster learn self-dependence. Also, most small children are naturally of a disposition to make friends with either adults or children, so that there is rarely a special need for making a point of social contacts at a very early age. These come naturally and gradually.

Only those children who are particularly shy and retiring really need to spend their time with other children from the earliest possible opportunity. Not infrequently there are enough older children in the family or in the neighborhood to furnish the 2 year old with more than adequate companionship. The father or mother does not always make a good playmate because the parent is apt to take too active a part in the planning.

Child Learns Self-Reliance

The little child put outdoors alone with a box of playthings frequently learns initiative and self-reliance before the child who has always had some one to play with. It is not a bad thing to learn to be satisfied when left alone, even when one is 2. Some people at 22 haven't learned as much.

However, unless a mother is anxious and willing to devote both time and effort to provide her child with just the right environment and the right stimuli, the youngster is better off in a well-run nursery school than at home. If staying at home means merely being shunted into the hourly society of an ignorant nursemaid and being dressed up every afternoon for a dull sedate walk up one street and down another, then by all means one should choose the nursery school and its creative atmosphere. In the end, it all depends on the mother.

Forestalling the Annual Winter Cold

CHILLY days when ventilation is difficult and clothing hard to adjust bring up annually the ever recurring matter of colds and how to avoid them. This set of suggestions from the Travelers Insurance Company might well be framed for the bathroom wall:

1. Take regular exercise daily. This may be done by walking to and from work if the distance is reasonable. When this is impracticable simple setting-up exercises for a few minutes night and morning are beneficial. Spend as much time as possible outdoors.

Get Plenty of Sleep

2. Put in regular hours of sleep. This is important during epidemics of colds. Sleep restores spent energy and builds up body resistance.

3. Keep the feet dry. If they have become wet, change to dry shoes and stockings at the earliest opportunity. A hot foot bath when the feet have been wet or chilled will often help to ward off a cold.

4. When colds are prevalent, avoid crowded public places, such as motion picture theaters, as much as possible.

Dodge the Sneezes of Others

5. Do not get the direct breath from persons having colds. They should protect you by covering the mouth with a handkerchief when they cough or sneeze.

6. Wash your hands frequently; use clean towels and other toilet articles. Avoid putting the fingers in mouth or nose.

7. Keep the nose, mouth and throat clean. Brush the teeth at least twice a day. Gargle the throat, especially after having been to the theater. Do it every night before retiring. Common table salt, a rounded teaspoonful to a pint of warm water, makes an excellent cleansing gargle.

Bigger *and* Better *for School Child*

By

Ruth Peck McLeod

DOES the family start the day with a good breakfast? The business man, the professional woman, the growing child, the day laborer—each needs a good morning meal. Theoretically the early repast is the most important of all, for it follows the period of longest fasting. In fact, life is said to be at its lowest ebb in the early hours.

Many of us mothers are guilty of having too easy a breakfast. We are prone to sleep late, rise hurriedly and serve whatever we have on hand; perhaps prepared cereal with cream, coffee and a few bakeshop rolls or doughnuts.

At an American Plan Hotel

If there are children in the home, there is a real reason for planning a wholesome, substantial and tempting morning meal. One mother said that she had never realized why her children ate so little breakfast until she took a trip and stayed at a hotel conducted on the American plan. Each morning a tempting breakfast was put before the children and each meal offered a change from that served the day before. She was astonished to see her children eat hearty breakfasts and ask for second helpings of crisp bacon and well cooked cereals.

This trip taught the mother two things: first, that the children will eat a good breakfast if the same type of meal is not presented day after day, and, second, that it is possible to stimulate the lagging appetite of the child just out of bed. This mother made an exhaustive study of better breakfasts and was surprised at the results she achieved. She declared that the palatable breakfast meant practically no more work, but merely called for a little forethought and ordering in advance.

Most housewives tend to slight nutritional needs more at breakfast time than at any other meal. In this servantless age, breakfast seems the bugbear of the day's work. However, with our fireless cookers and our quick gas or electric stoves we can prepare tasty, wholesome breakfasts with little effort. "Make your head save your heels" is an old proverb well applied in this case, for the housewife can sit down at her leisure and write in a 5 cent note book breakfast menus and special recipes suitable to the family's likes and needs. Suggestions may be gleaned from other sources also.

Precaution should be taken to avoid serving the same food on consecutive days. For instance, milk toast is delicious if served only once in a while, but that same palatable dish becomes insipid and monotonous if presented with endless repetitions.

Should Never Omit Fruit

The general breakfast menu contains fruit, cereal and meat or meat substitute dishes. One item that should never be omitted is fruit. Fresh fruit sweetened with only the sugar Nature put into it and served raw is excellent. Practically all of the fruits except cranberries and plums are antiacid in their effect on the system and produce an alkaline condition. Such raw fruits as apples, oranges, tangerines, grapefruit, grapes, bananas, pears and fresh pineapple are especially desirable.

Cooked fruits with a small amount of sugar added are next best. A wide variety is offered, such as baked apples, apple sauce, stewed prunes, stewed figs, cooked pears or apricots.

Some people enjoy dried fruits (dates, raisins, figs and prunes) served with the cereal. The

Breakfasts

and Entire Family

With Appetizing Menus

advantage in such a combination is that it makes one chew the starchy foods better, thus allowing more complete digestion because more saliva is mixed with the food as a result of the more thorough mastication.

Cooked Cereals Best

As for the cereals, the variety that requires cooking is to be preferred. Of these the whole grain ones are recommended, but the busy public has accepted the three-minute types enthusiastically because they save labor. The old fashioned cracked wheat or even whole wheat grains cooked for hours are delicious and full of vitamins and roughage. The coarse outer covering of cereals provides the laxatives that Nature intended. Coarse oatmeal, brown rice, corn meal and whole wheat all are excellent.

Ready cooked cereals need not be condemned entirely, for they have a good use in the diet and help to offer variety. Some of them, being partially digested, are of great help to those with a feeble, lagging digestive tract. Cereals that furnish the greatest amount of cellulose are most desirable because they serve as a laxative. Bran flakes, puffed wheat, shredded wheat and grape-nuts are wholesome. The majority of these need to be heated in the oven so that they will be crisp and require vigorous mastication. Milk or cream should never be poured over the breakfast food until it is ready to serve, as soaking the crisp cereal makes it soggy, unpalatable and less digestible and eliminates the necessity for thorough chewing.

As for the protein foods, milk is, of course, of supreme importance as a tissue builder. Cheese melted in a slow oven on toast, or in a toasted sandwich, furnishes a tasty bit of food for breakfast. Fish (creamed or broiled); liver with bacon; broiled ham (for adults only); crisp bacon; egg omelette; brains and eggs; scrambled, poached or soft boiled eggs, and creamed chipped beef are good. Men who work outdoors sometimes like steak at the morning meal, and some persons have an occasional chop for breakfast. The occupation of the man of the family will of course determine his nutritional needs, but the use of too much meat at breakfast should be discouraged.

Some persons do not care to add bread to breakfast if a cereal has been served, but others feel that it is not complete without toast. Children enjoy milk toast and even father may relish it at times. Corn muffins and graham gems are a nice change.

Hot Cakes or Waffles Only Occasionally

Hot pancakes or waffles have none too good an effect on the digestive tract. Too often, acid stomach and general digestive disturbances come from a breakfast consisting exclusively of cakes and syrup or waffles with honey. They often ferment in the stomach causing gas and distention of the abdomen because of the excessive drinking of water that follows the intake of so much sweet food. The serving of cakes is permissible occasionally, but never as an every day diet, and in every case the hot cakes should follow fresh fruit.

For beverages cocoa, chocolate, coffee or postum can be served. Children, of course, need milk, never coffee. If the younger members of the family want something hot, cocoa can be served occasionally, although it must be kept in mind that the cocoa or chocolate contains theobromine, which is a stimulant. Cocoa

and chocolate also have a constipating effect. Chocolate is more difficult to digest than cocoa because of the high fat content. Some youngsters enjoy a cup of hot milk with a pinch of salt and a small amount of sugar in it. Small children feel that they have a hot drink like mama and daddy and it helps to get the milk down.

Persons of all ages enjoy a glass of orange juice. Almost any fruit juice tends to stimulate the kidneys, having a decided diuretic effect.

With the foods mentioned, here are some combinations for breakfast, the beverage desired being added:

1. Grapes, oatmeal with cream, crisp bacon and toast.
2. Grapefruit, whole wheat breakfast food with raisins and cream, omelette and graham gems.
3. Baked apple, bran flakes with cream, creamed chipped beef on toast.
4. Orange, brown rice with dates and cream, crisp bacon, graham biscuits with apple jelly.
5. Stewed prunes, grape-nuts with top milk, poached egg on toast.
6. Apple sauce, cracked wheat with top milk, liver with bacon, toast.
7. Pear, puffed wheat, baked egg, biscuits and strawberry preserves.
8. Stewed figs, corn flakes with cream or top milk, creamed codfish on toast.
9. Stewed rhubarb, prepared breakfast food with cream, eggs scrambled with bacon, toast.
10. Stewed pears, oatmeal with top milk or cream, creamed fish on toast.
11. Fresh pineapple, cream of wheat, brains and eggs, plum jelly.
12. Raw apple, prepared breakfast food, egg omelette, Boston brown bread.
13. Figs, shredded wheat and cream, toasted cheese sandwich.
14. Baked pears, corn meal mush with top milk, broiled fish, toast.

To this list may be added the family's favorite foods. But breakfast needs variety, and the wise mother will introduce nourishing, laxative foods that will promote health and start the day right

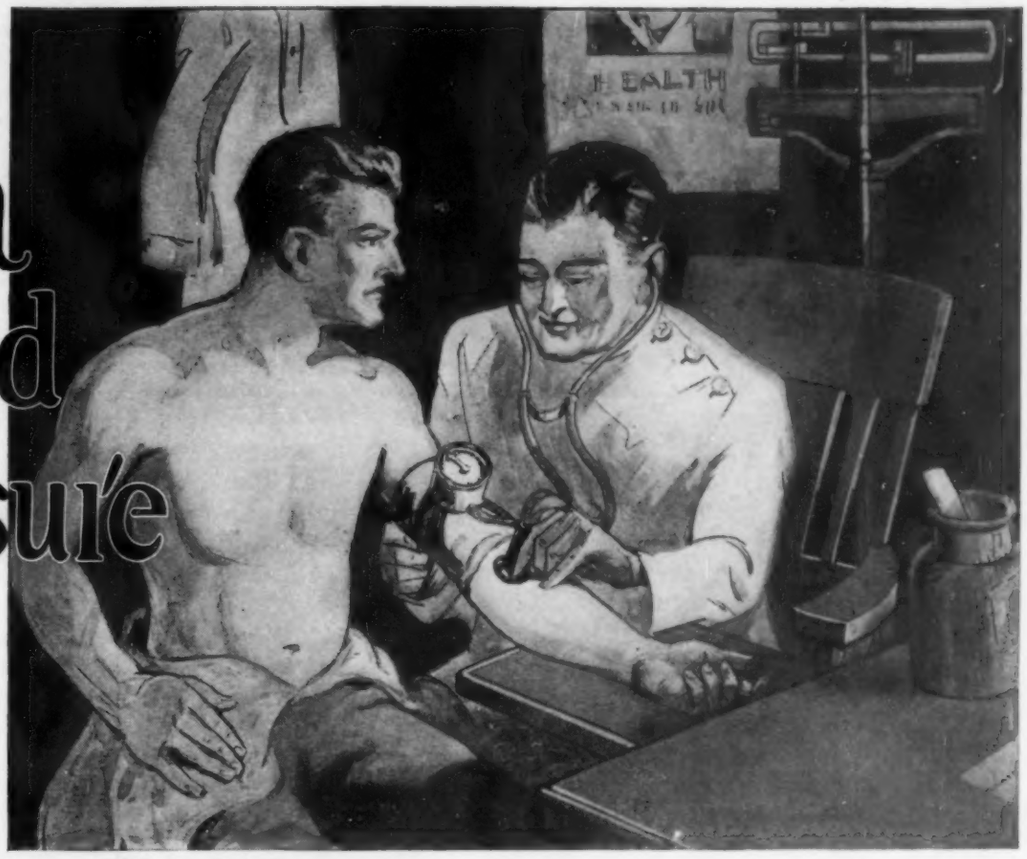
---

Birthplace of Walter Reed

IN THIS cottage in Gloucester County, Va., was born Dr. Walter Reed, the man who was in charge of the U. S. Army Yellow Fever Commission which proved that mosquitoes transmit yellow fever and thus freed the world from that dread disease. The house, Belroi, has recently become the property of the Walter Reed Memorial Commission, which is raising funds for its restoration.

High Blood Pressure

by MAHLON ASHFORD



BLOOD pressure is no longer a rare expression. Like widely advertised commercial slogans, the term is lawful currency, in a sense appreciated by man, woman and child. Every one uses it and every one has a somewhat vague understanding of its significance. To youth it is a jest, to the forties a premonition, to the past fifties, a Damoclean dread. Youth is not concerned.

The blood pressure, like the golf of the older generation, can only attract the stray witticisms of the young. When the hair line begins its swift and irretraceable retreat, when gray age begins to tinge the vanishing locks, when the belt line begins to lengthen, when reminiscence begins to color thought and speech, when stoutish men may be seen in sand trap and stream bed solemnly, prayerfully or profanely baiting tiny white spheres; when bob-haired, knee-skirted ladies, already starved to fashionable slimness, snappishly order unbuttered toast with lemonade unsweetened, then, alas, blood pressure has become a reality.

A Matter of Wide Concern

Among my friends in this middle span of life I find a keen desire for more definite knowledge of this enemy; some, that they may avoid attack, and too many, because the foe has already effected an entry.

It is a simple matter to obtain a practical working estimate of the pressure of the blood on its containing vessels. Every one is familiar with the measurement of air pressure in automobile tires and knows that a certain pressure must be maintained in these tubes. For different but equally cogent reasons the pressure in the arterial tubes is a matter of vital concern. The older and more worn the tubes, the more necessary becomes the maintenance of proper pressure in arterial as in automobile tubes. Too much pressure in the automobile tire can be quickly corrected but excessive pressure in the body arteries cannot be reduced so readily or permanently. It frequently bespeaks degenerative changes in vital structures that are irreparable and may abbreviate life.

Measuring the Blood Pressure

Blood pressure then is the expansile pressure of the blood on the arterial walls. It can be measured in definite terms and judgment passed whether a normal, high or low pressure exists. The customary procedure is to measure the pressure required to obliterate the pulse in the large artery of the arm. For the uninitiated it should be said that this can be done by the family doctor in a few moments without pain or discomfort.

The arterial pressure is similar in principle to pressure in a rubber tube through which water is rhythmically pumped. Every time the heart pump contracts a small quantity of blood is forcibly propelled into the great arterial trunks. This is the systole of the heart and with each contraction the pressure of this increased

amount of fluid in the arteries runs rapidly along these vessels producing the pulse beat. The pressure reading obtained at the time of the systole is consequently higher and is called the systolic pressure.

The diastolic pressure is obtained after this wave of systolic pressure has passed and before the heart again contracts, the diastole being the interval between heart contractions.

The difference between the systolic and diastolic pressures manifestly must be an indication of the power of the pressure transmitted to the arteries at each contraction and so is called the pulse pressure. If for example the pressure at a heart beat, or systole, reads 120 and between heart beats, or diastole, reads 80, then the pulse or contraction pressure will be 120 minus 80, or 40. Of the two kinds of pressure, the diastolic is the more important because it is always present, whereas the systolic only occurs momentarily even if the recurrence happens from 60 to 120 times a minute depending on whether one is lying down, standing or tempestuously haranguing the taxi driver who has invaded the right of way.

Having learned what the blood pressure is, the next step is to learn what it signifies. Blood pressure varies with age, sex and condition, but there is a normal pressure, wide variation from which signifies derangement of the body functions.

Three Forces Back of Blood Pressure

The blood pressure is a resultant of three factors. In the first place, the heart pumps blood into elastic tubes called the arteries. At the other end of the line there is resistance to be overcome as this arterial current passes from the larger arterial vessels through the capillaries, which may be regarded as the bottleneck of the blood circuit. Between these two opposed forces there is the elastic centripetal pressure of the arteries themselves.

When these three forces are properly balanced, the result is normal blood pressure for the individual. When one or more of these factors is seriously or permanently altered, abnormal blood pressure results inevitably.

Several conditions may affect these three forces. First, the heart, after the manner of a pump, shoots a quantity of blood under pressure into the arterial vessels approximately 60,000 times a day for every day of human life. If this pump is weak, that is to say if its musculature is deficient or degenerate or its openings (valves) are impeded or permit backflow (valvular disease), naturally the pressure with which it shoots the blood out into the arteries will be less than normal. If, on the contrary, the heart muscle is powerfully developed and the doors of the heart snap together accurately and vigorously after each beat, the pressure of the current of the blood shot into the vessels will be greater than normal.

Underdevelopment or disease of the heart muscle or heart valves lessens the initial pressure of the heart as a pump, while overdevelopment of the heart muscle with intact valves increases this pressure. It is also true that the nervous mechanism of the heart affects the power of this organ as a mechanical pump. Disease or degeneration of the nerve fibers of the heart will result in lessened driving power, irregularity or irritability of heart action. Overstimulation of these same fibers will result in excessive muscular contracture and increased pressure.

At the other end of the line several factors will raise or lower the resistance or back pressure of the capillary circulation. The capillary section of the blood circuit is the area of vital exchange for the millions of minute cells whose coordinate life constitutes the being. These minute elements obtain their sustenance from the blood stream and discharge their waste products into it. Pressure is essential for this exchange, but it must be just sufficient to push out to the waiting cells their food supply and to accept and pass on to the veins the waste matter. This exchange is partly the result of physical pressure, partly chemical reaction and partly vital selection of living tissue. If this living tissue becomes changed or hardened, more physical pressure will be required by the blood current to effect this trade of food for waste.

All the organs and tissues of the body are unceasingly engaged in this process but the principal markets of this vital commerce are the lungs, the liver and the kidneys. So when one or more of these great organs become diseased, there is encountered an increased resistance at this point and the blood pressure rises as a direct consequence.

Arteries Not Normally Rigid

The arteries themselves are the third factor in the maintenance of the blood pressure. They are not normally rigid tubes with the additional element of vitality present in all living tissue. As long as they are not themselves diseased they adjust themselves to the two factors already described.

If, however, their delicate musculature degenerates and is replaced by less elastic and less adjusting scar tissue or by nonvital and rigid salty deposits, they lose their stabilizing influence. This condition is called arteriosclerosis, or hardened arteries. Aged or hardened arteries have lost the elasticity and the flexibility of youth and health. Increased heart pressure or increased capillary resistance is no longer adjusted, and blood pressure goes up and stays up.

Many persons have been told that their blood pressure reading should be the age plus the figure 100; thus if they are 46 years old the normal pressure is 146, while at 60 a reading of 160 is normal. This of course refers solely to the systolic pressure. This statement is incomplete and inaccurate. Its greatest fault lies in the assumption that the blood pressure should rise steadily year after year in the healthy adult and that a man or woman approaching 65 should find no warning in a systolic pressure in the neighborhood of 170. This is not the accepted modern doctrine.

The medical profession had the same idea about the tables of body weight until recently. These tables prescribed a steady gain in body weight for the normal adult; thus if the normal weight for a given height was 125 pounds at 21 years, the same person should weigh 135 at 30, and 150 at 40 years. Men's weight and girth increased with the passage of years because they neglected to keep fit, and so these tables assumed this increase in weight and girth to be a normal development. The modern belief is that the gradual increase in these measurements in middle life is not normal at all. The body is accumulating extra weight because the individual is eating too much or exercising too little. Within certain limits modern women are following correct physiologic procedure in holding down the body weight by diet and exercise.

So it is with blood pressure. As the individual ages it is true that the capillary resistance gradually rises and the elasticity of the arteries diminishes, but this should be offset in the normal person by the lessening of the driving power of the heart. This lowering of the heart action should result from more moderate and less prolonged exertion as well as from gradual deterioration of the heart muscle. In short, Nature normally balances the several factors of which the blood pressure is a resultant. It is therefore not normal that this pressure should mount steadily year by year in the healthy adult. A systolic reading above 150 cannot be considered normal for the average person.

Before me are tables of measurement of more than 200,000 presumably normal men of all ages. They show the average at 20 years of age is 120 while at 60 and above the reading is 136. From these tables, as well as from observation, I believe that for the average man under 30 years the systolic pressure should not exceed 130, and for the man above that age should not exceed 140. This systolic pressure should not be judged by one reading, because a moderate physiologic variation may be expected in the normal person under different conditions.

When stoutish men solemnly descend into sand traps, blood pressure has become a reality.

As a working rule the blood pressure in women, other than those engaged in laborious vocations should be about 5 points lower than that quoted for men. As a matter of fact the blood pressure of women of the higher social classes of the passing generation averages 10 points lower, but it may be expected that the increased freedom and activity of women will result in an average reading closely approximating the male. So much for the upper or systolic reading. The diastolic reading for a man under 30 should be close to the 80 mark and should gradually increase to 86 by the time the man reaches 50 years. For women, one or two points lower may be considered the normal.

The figures just given do not take notice of the so-called physiologic variation, that is the variation encountered in healthy persons under special circumstances. The physician takes that into account and allows for such influences.

What then are the principal diseases causing pathologic variation? Conditions that will produce permanent and serious departure from normal readings include chronic degenerative processes in the kidneys, liver or lungs and general hardening of the arteries. These will produce a rise in the pressure. Lowered pressure may be expected in valvular diseases of the heart, degeneration of the musculature of the heart and general conditions of depressed activity of the body functions. Manifestly all

of these call for diagnosis and treatment by competent practitioners.

How may these conditions be avoided or controlled if they have already gained a foothold in the body? As a rule, blood pressures below normal cause less anxiety than high readings. In general they are associated with some form of deficiency in the heart action. If the physician finds a slightly depressed reading without a heart lesion, he will no doubt prescribe graduated recreative exercises, correction of dietetic errors, attention to hygienic regimen and reduction in sedentary or depressing occupation or habits, including the use of tobacco. High blood pressure is the enemy most feared. The best way to avoid it is to regulate the habits of life as middle age approaches so that one will not incur attack.

High blood pressure usually develops slowly through the years as a result of chronic constitutional infections or chronic intemperances. I use this last word in its widest, not its Volsteadian, sense.

A number of constitutional infections of the chronic type can be avoided or, if incurred, can be eradicated or controlled. In such cases medical science offers a way to avoid the ultimate penalty. Other cases may be incurred in spite of every care and in spite of the most exemplary habits of life. In most instances, if the condition is recognized in time, serious and permanent injury to the general body mechanism, including the blood pressure apparatus, may be avoided or at least mitigated.

Temperance in living habits for one may be excess for another. If a person avoids, eradicates or controls chronic constitutional toxemias and practices a wise adjustment of life habits to his individual equation, he should pass through the middle period of life with blood pressure approximating the normal, but he must remember that he is traveling toward a gradual deterioration of the body organs and that a man is as old as his arteries.

As the capillary resistance becomes greater with the aging of the vital organs and as the arterial elasticity lessens, the load daily placed on the heart should be lightened by less prolonged and less violent mental and physical exertion and by gradual moderation in the amount and complexity of food and drink intake.

Moderation and watchfulness then are the guardians of healthful age; moderation, in a comparative sense, as a gradual modification as one passes from youth to age, and watchfulness, not only as an application of reason to habits of living but also by means of periodic consultation with one's medical adviser. The medical adviser is the banker of man's most precious possession and will balance the account and tell him when he should transfer some of his remaining capital from labor to rest, from business care to recreation.

Guarding against Infantile Paralysis

RECENT reports of outbreaks of infantile paralysis in such widely separated states as Kentucky, Texas, Ohio and Oklahoma have caused state departments of health generally to issue warning and instructions for protecting children against this devastating disease.

The nature of the germ causing the disease is not known. It is thought that the disease is directly transmissible from person to person.

The mucous membranes of the nose and throat are known to contain the virus. The incubation period is from three to fourteen days, usually about seven days. The disease starts abruptly with fever and often nausea and vomiting. This stage lasts a few days and then paralysis appears.

In order to guard against this disease, one should, first of all, avoid taking children into sections where it is known to exist, warns the Texas state department of health. If the disease breaks out in the section where one lives, it is best not to try to run away from it but to keep the children away from public places of all kinds. It is a good rule not to allow them to play with other children at such a time, but to keep them in the sunshine in their own back yard.

The children's diet should include plenty of vegetables and milk of a safe quality in order to build up their resistance to disease germs. All food that is eaten raw should be well washed, and all food should be protected from flies. It is important to observe every rule of cleanliness.

A patient suffering from the disease should be isolated in a clean, bare room, well screened to exclude flies and other insects, for at least six weeks. During this time no visiting of the patient may be allowed. All discharges, including sputum, nasal secretions, urine and feces, should be thoroughly disinfected. Towels, bed linen and other fabrics should be boiled or dipped in a germicidal solution to eliminate all chance of transmitting the infection.

Some Bald Facts

Professor Scholder Appeals to an Ancient Weakness

By

Arthur J. Cramp

Three healthy hairs from this head were sent to the professor, who, after microscopic examination, decided that the hair was in a seriously undernourished condition.

Falling Hair
Dandruff
Itching Scalp
are Signs of Approaching
BALDNESS

NATURE HAS WAYS of warning us when certain parts of our body are sick or under-nourished. In the case of our hair the danger signals are itching scalp—dandruff—and falling hair. If neglected, these conditions will result in thin, lifeless and—eventual baldness.

Curable through HOME TREATMENT

Send a Sample of Your Hair for Analysis FREE

Professor Scholder will send us one that is invisible. To enable him to determine the condition of your hair, send a few of your hairs, ordinary combings will do! In connection with this coupon, Professor Scholder will submit them to his laboratory tests and send you a report as soon as the analysis is completed. There is no charge whatever for this coupon and report.

Hair Analysis Coupon

SCHOLDER INSTITUTE
101 W. 42nd St., New York

Professor Scholder:
I am sending a few specimens of my hair for your analysis with the understanding that you will report to me as soon as same are made and cannot be returned. You agree to make no charge whatever.

Name .....

Address .....

City ..... State .....

Typical column advertisement of the Professor Scholder Institute from a recent issue of Physical Culture.

EVER since the time of Elisha some men have exhibited a sensitiveness on the subject of baldness that is entirely disproportional to the esthetic importance of the subject. This may explain why the male sufferer from alopecia falls as hard for alleged hair tonics as does the female victim of obesity to the wiles of the fat reduction faker. Yet, although wisdom lingers, knowledge does come. Seldom, today, can a bald-headed barber persuade his scantily thatched customer that the infallible hair restorer he has on the shelf will make a billiard ball look like a bolshevik. Thanks to the medical profession's educational campaign against nostrums, the public of today demands greater finesse in being gypped; and the quacks rise to the occasion.

One of the cure-for-baldness concerns that professes to invoke modern science is the Professor Scholder Institute, Inc., of 101 West 42d Street, New York City. The individual who heads this concern is one "Professor Maurice Scholder, D.G." Just what the suffix "D.G." stands for is not quite clear, but it is an unimaginative magician who cannot acquire sapience by "degrees."

Professor Scholder is an "internationally renowned specialist on ailments of hair and scalp," and admits it! Heretofore, we are told, the professor has confined his activities to treating patients at his "clinic." Now he offers a "Course of Home Treatment" which is "based on the principle of individual analysis, diagnosis and prescription"; in other words, he claims to analyze and treat each case individually. It is this highly individualized diagnosis and treatment, "together with his secret formulas," that accounts for "his uniform success in stopping loss of hair, and actually growing strong, new hair."

From the cloister-like seclusion of his "clinic," the professor gets in touch with bald-headed hoi polloi through the medium of the advertising pages of such chaste publications as *Physical Culture* and *Strength*, and, more widely, by means of the radio. Whether by the ether or by the printed page, he urges the bald to write to him and enclose a few specimens of hair, so that he may, by microscopic examination, diagnose the condition.

Those who write receive a batch of advertising that, to the uninitiated, may be impressive and even interesting. We learn from it that Professor Scholder was born in Austria, so that, if one may be permitted to perpetrate a pun on so serious a subject, he might designate the subject of this article as the Herr Professor.

Mr. Scholder claims that in 1889 he was admitted to the Municipal Hospital in Vienna, from which he received a diploma in 1893, giving him the entrée to the "association and friendship of eminent scientists—like himself." The professor, it seems, had always been interested in devising a means that would revolutionize all methods for the preservation and restoration of human hair, and, in 1896, a learned Dominican friar in Galicia gave Mr. Scholder a scientific secret that was to be the basis of "his great discovery."

One learns, further, from the professor's advertising matter, that he has had for his patients the "Nobility of Europe and Persons High in Political, Social and Scientific Circles in America." In the list of American celebrities that Professor Scholder uses as an advertising asset, we find the names of Theodore Roosevelt; Harry Houdini, the magician; Dr. Charles M. Sternberg, former surgeon-general of the U. S. Army—all dead—and Beatrice Fairfax, to say nothing of many others of equal renown. The professor quotes from what he claims is an article that appeared in the New York *Evening Journal,* "written by order of the world famous editor, Arthur Brisbane." This article, puffing the professor, described him in part thus:

"He has always been sincere in his work, as he has been in all things, and that is why he always has a good following . . . he always stands by the truth . . ."

Further, one learns from the same source that the medical profession has accorded Professor Scholder the reputation of being "America's foremost specialist on hair and scalp diseases." Curiously enough, however, careful search fails to reveal mention of the professor or his methods in reputable medical works dealing with diseases of the hair or scalp. In view of the silence of modern medical textbooks on the subject of Professor Scholder, it seemed desirable to attempt to learn something about the gentleman's methods at first hand. With this in view, a letter was sent:

"I happened to tune in on WJAZ just about the time that your talk had ended. I got the impression, from what the announcer said, that you were specializing in the treatment of baldness. Can you send me further information?"

In a few days a letter came from the Professor Scholder Institute, signed "G. F. Johnston, Assistant Manager"; it read:

"We have your inquiry regarding treatment for your hair, but you have not enclosed specimens of your hair, for Professor Scholder's examination.

"Before Professor Scholder can tell you anything about your trouble, and advise you what to do about it, he must analyze samples of your hair. If you will therefore send these—ordinary combings will do—you will receive a report within a few days thereafter from Professor Scholder."

As Mr. Johnston asked that his letter be returned with the specimens of hair, some hair specimens were plucked from the fur cuff of a woman's coat and sent back for the professor to analyze. The fur was what is known in the trade as platinum fox. Four or five days later a letter signed "Maurice Scholder" came, thus:

"I have analyzed the specimens of hair you sent to me. A microscopic examination discloses that the roots are in a seriously undernourished condition. You are in grave danger of continuous and increasing loss of your hair, but it can still be saved by prompt treatment.

"I am therefore willing to undertake your case. If you wish to enroll for my treatment, it is necessary that you fill out the enclosed Diagnosis Chart very carefully, in order that I may ascertain what remedies will be most effective for your treatment. I will then prescribe for you and send you the proper remedies, which, I assure you, *will positively restore your hair and scalp to normal, healthy condition,* stop further falling out of your hair, and, if you follow my instructions faithfully, enable you to grow strong, new hair, to replace that which you have already lost." [Italics mine.—A. J. C.]

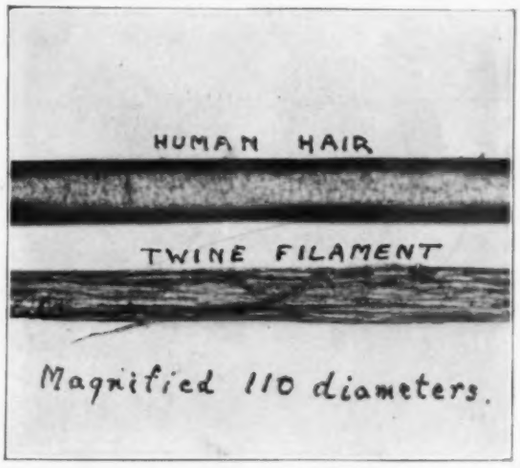
Curious that the professor should be able to tell by his microscopic examination that these hairs of platinum fox, from the fur cuff of a coat, had roots that were in a seriously undernourished condition! As has been said: "Ain't science wonderful?" It seemed desirable to test the professor's scientific acumen further. A second letter was written (from another address) and, accompanying it, were hairs taken from the fur collar of another coat. The fur in this case was what is known to the trade as wolf (Siberian or Japanese dog). Back came a letter from the professor, stating that he had analyzed the specimen and that the microscopic examination disclosed that the roots were in a seriously undernourished condition! The letter, in fact, was word for word the same as that sent in answer to the first inquiry.

But, it may be objected, possibly the hairs of the platinum fox and of the Siberian dog were in a seriously undernourished condition. It was, therefore, decided to enlist the aid of a young woman who has an exceptionally healthy head of hair. Her hair hangs well down below the waist (see illustration), and is so luxuriant as to excite, in these days of bobbed hair, notice and admiration.

Three perfectly healthy hairs were donated to the cause of science by the young woman. Each hair measured more than 3 feet in length. Two inches was carefully cut off the root end of each hair and the remainder of the three long hairs cut into short lengths and sent to Mr. Scholder (from a third address), with a request for an analysis.

The professor rose to the bait bravely and without effort swallowed it, hook, line and sinker. Back came his letter reading word for word with the other two letters—microscopic examination had again disclosed that the roots were in a seriously undernourished condition, and that the owner of the hair was in grave danger of continuous and increasing loss of hair, etc.

The tests so far had proved fairly conclusively that this international specialist on hair was unable to differentiate between the hair of a human and the hair of the fox or dog, and was equally impotent to distinguish between normal healthy hair and that which is in "a seriously undernourished condition." It seemed desirable to learn whether the professor really knew a human hair when he saw it, so a ball of heavy wrapping twine was called into requisition.



Photograph of a normal human hair and a piece of twine filament, greatly magnified. Specimens of the twine filament were sent to Professor Scholder twice. Each time he reported back that microscopic examination disclosed that the "hair" was in a seriously undernourished condition! Obviously no one with even an elementary knowledge of the human hair could mistake twine for hair.

A piece of the twine, 2 inches in length, was cut off and carefully unraveled, so that the individual filaments, glanced at superficially, had the gross appearance of hair. The twine in its natural state was of a color such as gentlemen are said to prefer, so half of it was tinted with a silver-salt dye, while the other half was treated with a lead-and-sulphur dye. In the first case, a dead-black resulted, and in the other, a brownish tone. The black twine filaments were sent to the professor from one address, and the brown twine filaments were sent from another.

In due course, back came the stock letter, stating that the specimens had been analyzed; microscopic examination disclosed that they were in a seriously undernourished condition!

All of which leads one to wonder whether the professor is giving as much attention to his mail-order patients as he is alleged to have given to the "persons high in political, social and scientific circles in America," whose names make such an impressive array in the Scholder advertising. The advertisements state that "the newspapers in this country and abroad have proclaimed Professor Scholder as the marvel of his profession." They should. Any one who, on the basis of a microscopic examination of a piece of twine, can diagnose the hair health of a person he has never seen and then promise to "positively restore" the hair and scalp to normal may rightly be called a marvel.

Seriously, though, one wonders just how far it is possible to go in humbugging the bald and still keep out of jail. Whether the "treatment" that the Scholder concern sells is as futile as its diagnoses is a matter for speculation. One thing the present investigation shows: Either the claim that Scholder will examine every specimen of hair sent to him is false or Scholder knows nothing about the microscopic structure of human hair. In either case, getting the bald-headed public to send in $20 for a "treatment" based on a fake diagnosis would seem to be dangerously near obtaining money under false pretenses.

As the Professor Scholder Institute, Inc., is carrying on this business through the medium of the United States mails the facts just detailed are respectfully referred to that efficient but sadly overworked department of the post office that issues fraud orders.

Off to College!

By

Fred N. Miller

One third of all college students are this month leaving home for the first time.

AS THE time of year approaches when vacationists are returning to the comforts of their own homes and the nights are beginning to presage the advent of winter, well over half a million youths begin to count the days until their college or university will reopen. Of this number roughly one third are leaving home for the first time. How have they been prepared physically to meet the problems of their new environment and what provision will there be in that new environment for their physical needs?

Home Training Will Carry Over to College

When Willie first went to school, braving the perils of busy street corners and the no less grave dangers associated with running noses and sore eyes, his mother's heart was filled with foreboding as well as with lonesomeness. But mother had been careful, and Willie had already learned much; that he must look around before he crossed the street and that he must never borrow anybody's gum or handkerchief. After all, it was only five or six hours a day that he was not under his mother's eye.

When Bill goes off to college, mother smiles but realizes with a pang that no longer can she look after her boy. Now indeed he must play the part of a man. Will he take care of himself, will he remain clean and upright? What will happen when he gets sick; who will take care of him then?

If she is a wise mother she will have thought often about her boy's going away and will have begun long ago to prepare for this time. As a matter of fact, the boy and girl will for the most part go on living in much the same manner as at home. If at home he brushed his teeth, ate a wide variety of foods and was regular in his habits, he probably will be just as careful of his body at the university. He may have physical defects but they should be corrected as far as possible. Unfortunate indeed are the boy and girl filled with fears; the boy who has been told and retold that he has a weak heart, the girl who is nervous, the boy who is sensitive, is not strong or has a weak stomach. Nothing is so disabling or so calculated to destroy the joy of living as an unfounded or unwarranted phobia of this sort.

Personal and Sex Hygiene

On the other hand, real facts concerning personal hygiene, including sex information, learned in the classroom or at home, will be of inestimable value, especially if habit formation has kept pace with the acquisition of knowledge. There should be a wholesome delight in fellowship with boys and girls of the same age and a love of sports not only as a spectator but

as a participant unafraid of hard knocks. No amount of knowledge or habit training in health matters will assure the college boy or girl freedom from health difficulties, but a little forethought will help to meet wisely those difficulties that cannot be prevented.

When the boy first goes to college he must find a place to live. In the choice of a residence, social considerations are not to be ignored. While it is true that constant close association in large living organizations does materially increase the health hazard, especially with regard to colds and allied conditions, yet that association is most vital in preparing the student to take his place in society and more than compensates for any added risks. In general there is little difference in the health advantages or disadvantages of life in a boarding house, a fraternity or a dormitory, so that choice may safely depend on economic or social considerations.

If, however, the student must live alone, it should be insisted on that he eat with his fellows at the commons or at some club at which he can be assured of food adequate in amount and variety. The more anxious he is to live economically the more dangerous is it for him to shop around among cheap restaurants or to board himself, either alone or with one or two of his fellows. His need for good food served reasonably well is increased by any outside work that he must do to earn money.

Even the best living conditions will not prevent sickness. If an institution is chosen that makes no provision for the sick student, the parent may well give some consideration to this problem. Most university towns are attractive to professional men so that even the smaller cities have a comparatively large number of able physicians. If, as is likely, these physicians are unknown, the family doctor can find out more about them if he does not already know one or two in the university community.

Family Doctor Will Recommend Physician

There are at least two advantages in having the family doctor choose the physician for the boy or girl at an institution that does not have its own physician. In the first place his considerable knowledge of the boy or girl may be of later value to this physician. But more important is the fact that in case of emergency, such as an acute attack of appendicitis, the physician in the university town can describe the case in detail to the family doctor, who can make clear to the parents the need for operative intervention. An arrangement of this sort will give the parent the assurance that avoidable delay will not occur and at the same time a feeling of security because the advice came from a man who is well known and trusted.

It is not meant, of course, that only after an emergency has occurred should the physician be called in. As a matter of fact, if the university itself does not provide for a physical examination before matriculation, the boy or girl might well go for that purpose to the physician recommended. The examination will serve as a means of introduction and will also be of value to the physician later and may indeed disclose defects that call for immediate attention.

Fraternity, dormitory or boarding house life is preferable to living alone.

Doctor's Bills Should Go to Home

It might be well, too, for the parent to have the physician send all bills to the home rather than to the boy or girl. Students have all too many outlets for their money and are sure to economize unwisely on doctor's bills if the money must come out of their allowance or even if they must write home and ask for money for that specific purpose. It will always be a comfort to realize that the boy knows per-

sonally a doctor who in a measure may be held responsible for his physical well-being and that he will have no hesitation because of money in consulting this doctor as soon and as often as necessary.

Nowadays, however, an increasing number of colleges and universities have provided both for an entrance physical examination and for some sort of care in case of sickness. Although the first university health service was established less than twenty years ago, there is now scarcely any notable institution of higher learning that does not have an extensive department concerned with the health of its students, and increasingly more of the smaller colleges are providing medical supervision.

At the last meeting of the Student Health Association of America, eighty-five institutions of higher learning were represented on the membership roll. It is the exception now for a college to admit a boy or girl without a physical examination, which in most instances is relatively complete.

This examination is given not only to determine the type of physical activity the student is capable of in this day when athletics are so much emphasized but also the amount of academic and extracurricular work that is advisable. University governing bodies are coming to realize the folly of spending huge sums on individuals physically unable to make use of the training received. They are realizing, too, the foolish extravagance of allowing students to neglect their health to the point at which they will be unable to produce.

College Needs Modern Hospital

As a result of this attitude toward the health problem in our colleges such widespread changes have been instituted that in not a few cases students are better taken care of and lead more hygienic lives at school than they did at home. Not only are courses available in which those interested may learn scientific facts about personal hygiene and sanitation, as well as anatomy and physiology, but there is definite provision for the maintenance and restoration of good health.

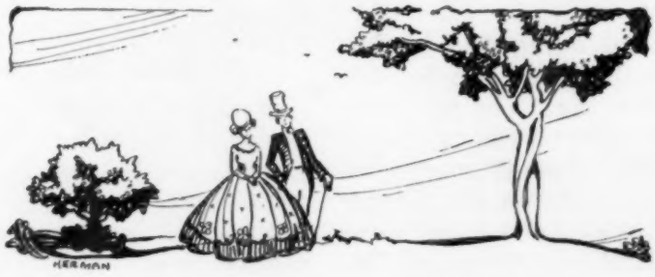
The university that does not have a modern, albeit perhaps modest, hospital, staffed by physicians and trained nurses, to care for its sick students is now a rare exception. Although this whole movement is of such short duration that there is a great diversity in the aims and scope of various health services, in general, at least two services are rendered. These may be described as dispensary and infirmary services.

In the infirmary are kept those students who are sick enough to be in bed. This not only assures their adequate care but protects the well students who live in intimate association with them from the imminent danger of contagious and infectious diseases. Parents may well feel relieved at the thought that their children are freed from the necessity of living in the same house or even in the same room with some one who may be contracting a contagious disease. It is a relief also to feel that one's children, sick away from home, may be adequately cared for by those trained for that work.

Every College Needs Health Program

In the dispensary, which ideally is intimately associated with the infirmary or hospital, students may have treated the less serious injuries and ailments. The proper care of a slight wound, clean dressings on a boil, a little attention to a beginning cold, may in many cases prevent serious complications, such as blood poisoning or an abscessed ear. Students are urged to use their health service for trivial things and to use it frequently.

Parents might well find out more about the health program of the college or university to which their children may go. Nor should they be satisfied with the generalities of a catalogue that extols the climate and scenery or the paternalism of the faculty. In this day trained educators are almost unanimous in their assertion that the organization of a college or university is not complete unless definite provision is made for the care of sick and injured students by physicians and trained nurses. Parents should encourage their children to make every use of this service and should themselves find out more about it.

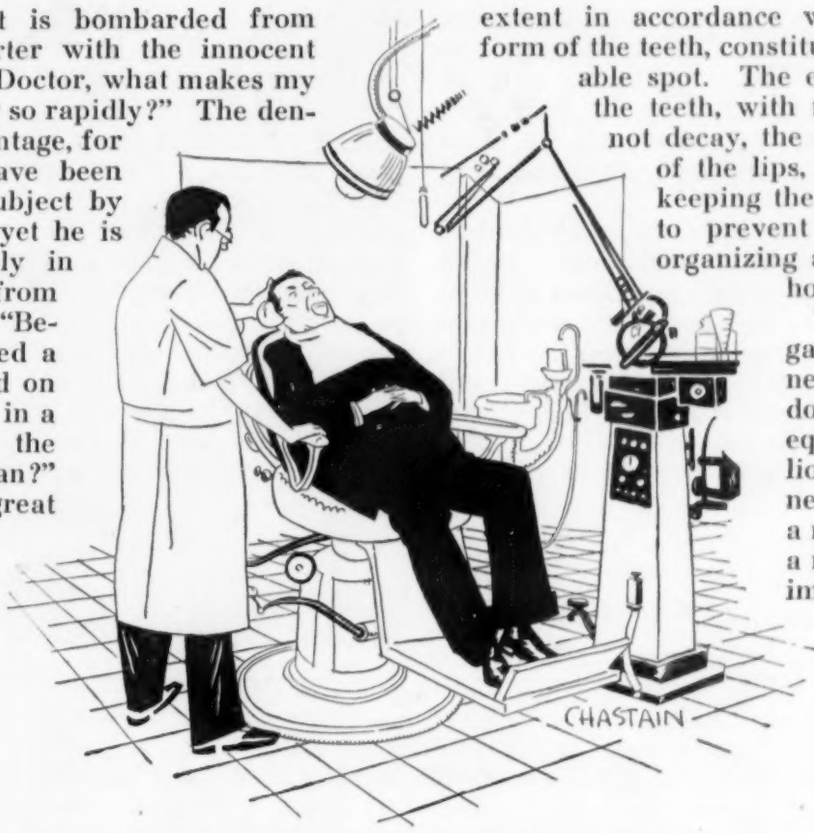


What Makes Our Teeth Decay?

By W. A. Kerrison

THE dentist is bombarded from every quarter with the innocent question, "Doctor, what makes my teeth decay so rapidly?" The dentist is at a disadvantage, for many volumes have been written on that subject by scientists, and as yet he is able to reply only in part. To quote from the great Fabre, "Because I have stirred a few grains of sand on the seashore, am I in a position to know the depths of the ocean?"

Of course, a great deal is known, and new and wonderful facts are constantly being unfolded by persistent research. But the whole story may never be known.



The dentist can answer most of your questions.

It is true that the immediate, direct or exciting cause of decay has been fairly well understood since the investigations of Miller, about 1890, who demonstrated the fact that certain organic acids formed by the action of mouth bacteria on carbohydrate substances, when held in contact with the enamel for a certain number of hours, dissolved out the cementing material of the enamel rods, thus causing them to fall apart and open the way to the softer dentine beneath. Because the acid, in order to do its work, must exist in concentrated form, this process can go on only in protected locations. Such protection is afforded the process of decay in the tiny pits and fissures and in the other defects in the enamel.

The contact point, at which each tooth touches its neighbor and which varies in form and extent in accordance with the geometric form of the teeth, constitutes another vulnerable spot. The exposed surfaces of the teeth, with rare exceptions, do not decay, the natural movements of the lips, cheeks and tongue keeping them sufficiently clean to prevent the enemy from organizing and gaining a foothold.

The popular slogan, "A clean tooth never decays," is no doubt a fact, yet it is equally true that millions of dirty teeth never decay and that a really clean tooth is a mere figment of the imagination. This is not evidence that dirty teeth are desirable, even though they might permit the formation of poisons that would neutralize the process of decay. There are other diseases in the mouth more disastrous than decay; pyorrhea, for example. But it is hardly necessary in this enlightened age to put forth arguments for a clean mouth and body.

What are the other factors that determine whether a tooth in a comparatively clean mouth will decay or whether a dirty tooth in a filthy mouth will remain free from disease for a lifetime? Suitable diet is part of the answer to this question. A diabetic patient usually has a good digestion and a still better appetite, but the more he eats the worse off he is; in the end he will be weaker and lighter than if he had eaten much less. His capacity to assimilate food is definitely limited, and any fuel over the fixed limit of his own individual chemical laboratory is merely so much excess which he

cannot burn and which will be oxidized only partially, so as to produce toxins that poison his system.

Similar principles may be applied to teeth and bones. Although these tissues are made up largely of calcium, yet one might consume enough of that element in a few days to build an entire set of teeth without their receiving any benefit from it. Other conditions must exist in order that this mineral may be assimilated. In the first place, it has been found that phosphorus is necessary to the assimilation of lime. Certain endocrine glands also exert a controlling influence over the process; and it is logical to believe that these, in turn, depend on exercise, sunshine (or equivalent rays), and the natural inheritance of a normal mind and body. As to the vitamins, presumably the same principles would apply. Minute quantities only of these substances are required by the body, and it is unnecessary to consume more of them than are found in natural and unrefined food products.

Vital processes are complex in every field of nature. They are bound up intricately with the reactions of chemical equations. Remove from any chemical process one compound, one element, even a single atom or ion, and the entire process may be perverted and the end-result entirely different. A certain strain of bacteria, a single element in the saliva, an alteration in the blood cells, or the perversion of nervous irritability may spell the difference between a mouth diseased with caries or pyorrhea and one in perfect condition. In view of such facts, does it seem strange that the dentist is unable to answer instantly and in a word vital questions concerning mouth conditions? When a person is afflicted with decay, pyorrhea, so-called trench mouth or any other mouth disease, no dentist can determine the basic fault without a careful examination and inquiry into the person's habits and history; the condition often calls for the attention of a physician as well as a dentist.

What message that will be helpful in the struggle to preserve the teeth and to promote bodily health can be drawn from such facts? Surely it is not one of discouragement. Many persons, when they learn that science has not yet mastered all the laws of health, refuse what rays of light it is able to offer. This is an absurd position to take. Every one should be eager to glean the tiny morsel that is offered.

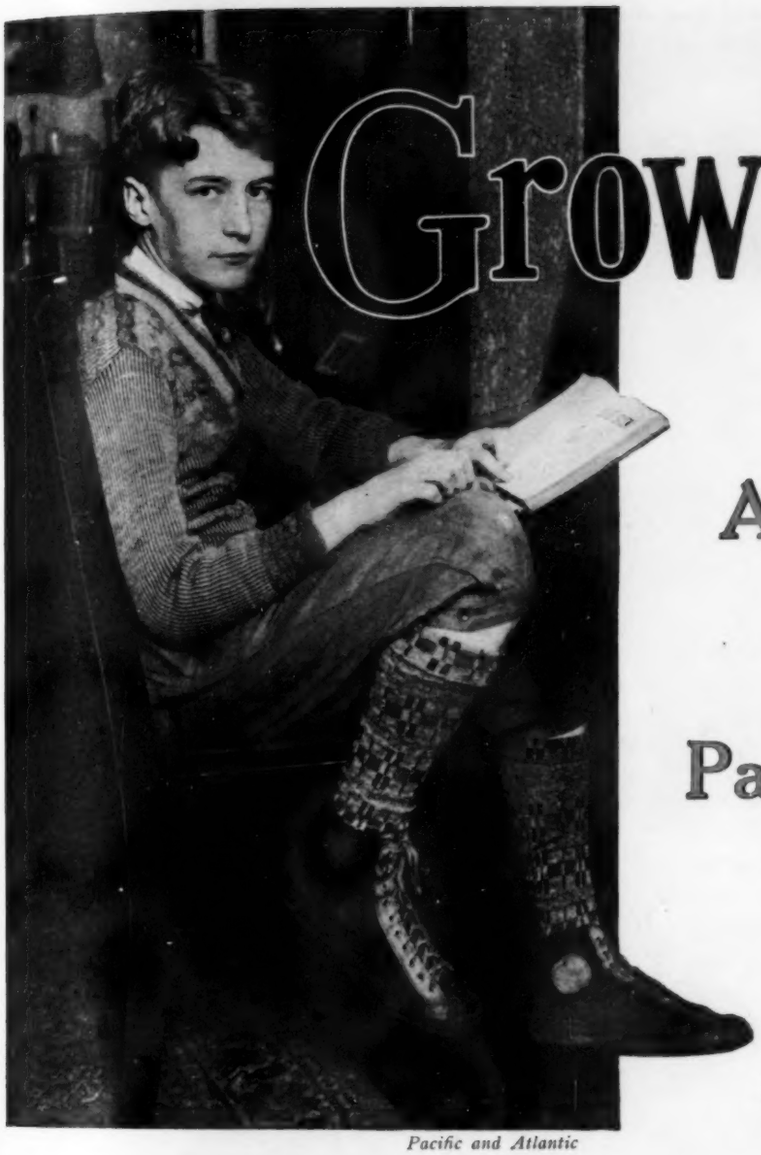
If a person has a dental problem, the dentist may be able to solve it easily, but that person should never imagine that he can solve it himself without the dentist's advice. If it should prove more complex and discouraging, a person should not refuse all the help that the best men of the dental and medical professions are able to give. The best practice is to go often to the best dentist and the best physician available and to follow their advice.

These Five Mothers Wrote Best Letters

IN THE letter contest for mothers only, which closed August 15, 1927, prizes for the best letters on "How I Entertained My Convalescent Child" were awarded by the judges as follows:

First prize, $25, Jane Campbell Kerr, Redwood City, Calif.
Second prize, $20, Mrs. M. S. Lachicotte, Charlotte, N. C.
Third prize, $15, Mrs. Aura E. Roberts, Springfield, Mass.
Fourth prize, $10, Mrs. Ralph A. Shelly, Atchison, Kan.
Fifth prize, $5, Elizabeth M. Jacob, Wisconsin Rapids, Wis.

The prize letters, containing numerous workable suggestions, will be published in an early issue of HYGEIA.



Pacific and Atlantic

Growing Boys

An Article for Boys and Parents of Boys

By

PHILIP M. STIMSON

USUALLY the boy who is so fortunate as to be equipped with a well constructed and well developed body is free from thoughts of ill health. He takes his smoothly running bodily machine as a matter of course, but he cares for it, if he is wise, with more faithfulness than he would even an expensive automobile. As a result his machine usually lasts him a long time.

But if his equipment is not of the best and is not running smoothly, he may be conscious of various squeaks and rattles, of missing cylinders and other evidences of trouble.

If a boy is subject to headache, there is probably something wrong with his eyes, with his digestion or with his sinuses, which are the air spaces in the bones of his face. He should not be conscious of his eyes, if he treats them properly. They should not smart, nor should he have to squint or strain when using his eyes ordinarily. His ears should each be able to understand whispering across a fair sized room.

A healthy boy breathes freely through either side of his nose and sleeps with his mouth shut and without snoring. His teeth are clean and free from cavities, and sufficiently regular to allow thorough chewing. His tonsils are either out or are small, and the boy is not subject to sore throat.

A fit and healthy boy is free from cough and from pains in the chest. He can run violently and get his wind again quickly. He always has a good appetite, is not conscious of his digestion, and has at least one regular daily movement, perferably in the morning. Of course he does not wet the bed. He is free from leg aches and foot pains and from little twitches. He can hold a full glass of water steadily at arm's length without a ripple.

His skin is free from blackheads and other blemishes and from pallor, puffiness or circles under the eyes. He carries himself well, standing tall, pressing his neck back against his rear collar button and with his abdomen held in. Especially, he is about average in weight or possibly a little over this amount. He certainly is not more than 7 per cent under weight or 20 per cent above.

Ewing Galloway

An important preliminary procedure in baseball.

The healthy, well built boy, if he is from 12 to 16 years of age, gains from 12 to 16 ounces a month, depending somewhat on his gain in height. He eats well, sleeps well, learns well and feels well.

Unfortunately, all too few boys have this perfect equipment. Some are born and grow up without any noticeable physical defect. They have much to be thankful for. Others have a good start and then, because of accident or disease, grow handicapped in the structure and working ability of their machines. Others, even though they are apparently equipped with miserably handicapped bodies, can and do determine, as did the late Theodore Roosevelt in his boyhood, to build for themselves strong, capable bodies. Everybody knows what a powerfully athletic man President Roosevelt made of himself. Yet Theodore Roosevelt was a delicate boy.

Food Is Boy's Gasoline

Food is a boy's gasoline. He needs three square meals a day. Coffee and a roll for breakfast do not constitute a square meal. A growing boy needs a bowl of cooked cereal for breakfast 365 days a year. One such bowl contains as much food value as from four to seven bowls of the dry breakfast foods, which are mostly filling but not nourishing. Coffee and tea are definitely harmful to growing boys, overstimulating them nervously and often being directly responsible for nervous fatigue, exhaustion and general crankiness.

A boy's three meals should contain a variety of foods. Fried foods and spices should be avoided, as should also an excess of any one article of food. It is a bad plan to make a meal of one thing, something the boy likes, ignoring the foods of which he is not so fond. He should be made to remain at the table at least fifteen minutes for breakfast, twenty for luncheon, and twenty-five for dinner, because there is nothing to be gained by gobbling one's food.

Raw vegetables should be eaten in moderation only, for while they are rich in certain food values, they are usually bulkier than when cooked and more difficult to digest. Raw fruit should usually be eaten for dessert only for similar reasons of bulk.

Too Much Fruit between Meals

Here is what happens when fruit is eaten between meals:

A boarding school was given several barrels of apples for the boys and the barrels were left where the boys could help themselves. Everybody was enthusiastic about the plan. But in three days the housekeeper went to the headmaster and said that half the food put on the tables was being returned to the kitchen uneaten; the boys were not hungry at mealtimes, and soon the physical director reported that all the boys were losing weight. They were eating so much bulky food of little food value, that they had no appetite for more nutritious food.

So boys need proper gasoline for their automobiles. But if they drive their cars hard all day and late into the evening there will be no gasoline left over. Boys need food for growth as well as to keep going. If they use up all their food in being active all day long there will be none left over for growing. The average 10 year old boy should put his automobile in its garage—that is, should go to bed—by 8 o'clock; a 12 year old boy by 8:30; a 14 year old boy by 9, and a 16 year old boy by 9:30 or 10 at the latest. Boys who are underweight, high-strung and overactive should be in bed a half hour earlier, even as a high powered racing automobile is driven much less than is a taxi.

Wise parents will also have their boys' welfare in mind in at least two other respects.

In the first place they will see to it that their boys approach puberty with an adequate knowledge of sex. If they feel incapable themselves of telling their children what they should know, they should send them to some wise doctor, minister, priest or physical director. What boys learn from each other is usually garbled or false and practically always told in an indecent way. On the other hand if they are properly informed at the start, it may often mean the

A real meal is in preparation at the right.

Below, the fun seems both dangerous and pointless. Playground or gymnasium equipment gives the same thrills minus some of the hazards.

Photos by Ewing Galloway

difference between moral and immoral manhood, between health and a broken life. Parents must prepare the boy for the pitfalls that lie ahead; in other words, they must equip his car with headlights.

Parents should also see that their boys are given the benefits of modern science as regards protection against the various contagious diseases. Some protection is obtained in clean lives, good hygiene, proper diet, the avoidance of colds and the avoidance of crowds, but these measures are usually not enough. In fact, people who live in the country are usually more susceptible to contagion than are those who live in crowded districts.

To insure protection against such diseases as diphtheria, scarlet fever and smallpox, parents must turn to medical science. Smallpox unfortunately is not yet wiped out. So many people remain unvaccinated that this dread disease is still common even in many parts of the United States, there having been over 40,000 cases in the United States in each of the last two years. Vaccination brings absolute protection for a period of years and every boy is entitled to this protection.

Diphtheria is an even more serious menace attacking over 200 persons a week in New York City at the present time; yet a simple skin test, the Schick test, will tell in two days whether or not the boy is immune or susceptible to the disease. Three simple hypodermic injections of a fluid called toxin-antitoxin will in nine cases out of ten bring him an immunity that will last for years. Surely the boy is entitled to that protection.

For scarlet fever, protection is not yet quite so easily obtained. The Dick test, a simple skin test like the Schick test for diphtheria, will readily determine who is susceptible to scarlet fever and who immune, but protection against the disease can be obtained at present for a few months only. That, however, is well worth while if there is scarlet fever in the building, the boy's school or his club.

Even as an automobile is protected by bumpers from unnecessary smash-ups, so these and other inoculations will protect the boy from unnecessary diseases.

Therefore, let each boy be compared by himself and his parents to an automobile. Keep the car in thoroughly good condition; provide it with only the most efficient gasoline and oil; don't drive it at high speed all the time but leave it in the garage occasionally; equip it with proper light lest it run into traps and with bumpers to prevent unnecessary smash-ups. For in that way only will the car last longest and be of the most use to its owner.

The Stupid Child

By

Walter Béran Wolfe

"But why does the water boil, Mother?"
"Don't ask everything, my boy. It makes your head ache to know everything."

FEW problems that confront the parent, the teacher and the psychiatrist are so difficult of solution as the problem of stupidity in children. "Seeming stupidity" is a better term because if we attempt to define stupidity, we find ourselves in a quandary.

That stupidity and ignorance are not one and the same thing is obvious. A college professor does not know what makes an automobile go. A minister probably could not tell you why bread rises. The college professor or the minister is not stupid because he does not know the technicalities of internal combustion or of yeast fermentation. On the other hand, a cretin (a person whose brain has never developed because his thyroid gland has been deficient since childhood) may have only fifty words in his vocabulary but he will intelligently perform those acts that his defective brain is capable of understanding. The cretin has a very low intelligence quotient, as judged by any psychologic test, and yet he is not stupid.

Two Kinds of Mental Slowness

As a matter of fact, there are just two kinds of mental retardation. There is the mental retardation that results because a person has not, from birth on, the necessary instruments (brain and nervous system) for intelligent action. Such persons are not really stupid. Their mental horizon is narrow, but up to the powers that are given to them, they act intelligently; they appear stupid only when judged by the standards of normal persons.

Another group of persons do not suffer because nature has not endowed them with the proper instruments for thought, but because barriers have been erected to their thinking processes by their environment or because they themselves have attached a spiritual ball and chain to their mental processes, to the end that by appearing stupid they need not enter into competition with others whom they think better equipped.

Spiritual Possibilities Undeveloped

The first type of mentally retarded individuals—the idiots, imbeciles, cretins and morons—may be said to be stupid because the physical bases of mental development have been dwarfed by physical means, such as poison, the failure of internal secretions, or changes or degenerations in the actual brain substances. It is simply a question of improper development.

Just as the brain, the nervous system, the glands and the sense organs require proper material for their construction, so the development of the soul can be consummated only when the proper material is at hand. Understanding and character nourish themselves and grow from experience. A child that has too few or too many or wrong experiences may be damaged in his spiritual development.

Most mentally retarded cases are not those in whom the development of the soul has been

damaged by a lack of physical material. Most cases are among children whose mental retardation results from false development of their spiritual possibilities. It is easy to distinguish between this failure and feeblemindedness. A good word in common language does not exist to describe it but it can be called ball-and-chain thinking. This ball and chain is frequently attached to the thought processes of children by their unthinking parents.

No One Answers His Questions

Consider a child of 3 years who stands in the kitchen while his mother is cooking and wonders about the humming of the tea kettle. He asks, "Mother, why does the kettle hum?" Mother answers casually, "Because the water is boiling." The child does not become any cleverer because of this answer. He asks eagerly, "But why does the water boil?" The mother has no time to devote to instruction, so she answers, "Don't ask everything, my boy. It makes your head ache to know everything."

Later this same child is playing with his sister in the nursery. She is doing her homework, turning over the pages of an atlas. "What kind of pictures are those?" asks the boy. "Countries," says the little girl. "What are countries?" His sister ends the discussion by assuming a pedagogic tone and declaring, as she has often heard her teacher declare, "A foolish boy can ask more questions than ten wise men can answer!"

Later he is in his father's carpenter shop. Saws, planes, chisels, hatchets—these are a series of great wonders to the boy, each one of which he would like to have explained. But his father says, "You still have ten years to learn. Ask me then."

What happens? The boy learns that he excites the impatience and the anger of all those who already know, by asking questions, and so he learns not to ask at all. The interesting riddles that he cannot answer himself gradually begin to lose all their interest. It is the beginning of a thought barrier. A year later he passes by the wonders of life without any interest in them. He does not look any more. He believes there are no subjects about which he may ask questions. He takes things as they come. Nothing astonishes him, nothing sets his spirit in motion. He is dumb, timid, stupid, disinterested. If a toy breaks in two, he does not consider the fact that he himself might repair it.

Seeming Stupidity at School

At school he learns everything that is asked of him, but he never asks a question spontaneously. Learning at school is an unpleasant duty, and the teacher is quite right when she says, "This boy has little interest in my teaching. He learns everything by heart, but he has no vital understanding of what he has learned." The child appears stupid. But she makes a mistake if she thinks that the child is naturally stupid. She does not understand how many disappointments have caused this ball-and-chain thinking; and for this reason she also cannot free the child from his shackled thought.

The behavior of parents largely determines whether children will acquire the correct point of view about the tasks and problems of life, whether at a later time they will be able to understand how the real problems of life are solved or whether they will remain forever dependent on the help of others. Once let a child discover that his fundamental curiosity about the world meets with insuperable obstacles at every turn, and he will soon be weaned of asking questions. He comes to the conclusion, "I do not understand anything. I am stupid." With this idea in mind, all subsequent experiences only confirm his conviction.

Ninety per cent of so-called stupid children are not stupid at all.

If a person believes he is untalented, he avoids all tests in which this lack of talent will come to the surface. A child in whom the idea of his stupidity has been inculcated by unthinking parents naturally withdraws from all contact with the world; the more he withdraws, the less does he experience and the more actual becomes his ignorance and stupidity.

A really feebleminded child remains happy, because his inability to per-

form anything does not touch his consciousness. But the child whose thought processes are shackled with a ball and chain is unhappy. He has a feeling that he has lost his way, that he cannot find it back. The older he grows, the greater becomes the gulf between him and his playmates of the same age. He learns only that he cannot learn.

"Just because I am convinced of my stupidity, I shall not try to learn anything more. Because I do not try to learn anything more, I am convinced of my stupidity." Now put such a child into ungraded classes and his death sentence is pronounced. Human society labels him as an inferior being, and the last little spark of self-confidence is annihilated. The result inevitably is an embittered, malicious individual who becomes an enemy to society.

A variety of experiences may lead a child to the conviction that he is stupid. In this brief article it can only be suggested to parents and to teachers that every seemingly stupid child should have the benefit of a thorough psychiatric examination by a kindly, understanding knower of the human soul. If the psychiatric examination points to vicious environmental influences, every effort should be made to remove the child from a position in life in which every fresh experience will serve only to humiliate him.

It is my opinion that 90 per cent of so-called stupid children are not stupid at all. They have assumed the cloak of stupidity because they have not been properly prepared for the actual battle of life. Obviously, we must understand them and make their defense unnecessary.

Health Rules for Girls Who Work

A THOROUGHGOING health program that recognizes the limitations of the working girl's time and resources is detailed by the *Industrial Hygiene Bulletin* of the New York state department of labor. Most of the thousands of girls who work in factories and offices violate the principles of good health constantly and their efficiency is accordingly reduced. The following is a telescoped digest of the rules.

Food: Eat regularly, slowly and chew your food thoroughly. Eat a varied diet, including plenty of fruit and vegetables, with meat only once a day. Drink two glasses of milk every day and very little tea and coffee. Do not eat many sweets. Avoid fried, greasy and highly spiced foods. If you are more than 10 pounds overweight, eat less of everything, especially fats, sugar and starch. If you are more than 10 pounds underweight, eat more at each meal, get more rest and learn to relax. If you feel worried or nervous, eat less than usual.

Water: Drink six or eight glasses of water a day. Drink a glass on rising in the morning. Drink water with your meals, but do not use it to wash down food insufficiently chewed. Cool water is better than ice water.

Clothing: Do not dress too warmly indoors. Wrap up when going outdoors. Wear comfortable shoes to work. Do not wear a corset of brassière that pushes the abdomen down. Do not wear rubber undergarments to reduce.

Fresh air: Keep the windows open in your home all the year round. The room temperature should be 68 F. in the daytime and 50 F. at night. Try to stay outdoors at least an hour and a half every day. Get outdoors at the lunch hour and walk to and from work. Spend your day off outdoors as often as possible.

Recreation: Vary your recreation with outdoor exercise, such as skating, tennis, hiking. Dancing is healthful if not overdone. Do not go to the movies too often, especially if your work is sedentary. Movies mean poor air, no exercise, late hours. Go to a gymnasium or swimming pool if there is one near.

Bathing: Take a warm tub bath every day and follow it with a cold spray to help prevent colds.

Sleep: Sleep at least eight hours every night with the windows open, using plenty of blankets in cold weather to avoid being chilled. If you do not sleep well, consult your doctor.

Teeth: Brush the teeth in the morning and before going to bed. Keep the teeth in good repair.

Menstruation: Painful menstruation can often be prevented by keeping the bowels regular and by taking plenty of fresh air and exercise. Continue your normal exercise and the warm tub bath and get more sleep than usual during this period.

Constipation: Eat plenty of fruit and vegetables and coarse foods such as bran, whole wheat bread and brown rice.

Colds: Follow the rules for fresh air, food, exercise, clothing and bathing and you will not usually take cold. Avoid drafts and overheated rooms.

Headache: Constipation and eyestrain most frequently cause headache. Find out the cause and remove it permanently. Do not take headache powders or medicines of any kind.

Try to get fun out of your work and the satisfaction that comes with trying to do your work well. Few things contribute so much to good health and a sense of well-being.

THE PLAYERS

Rudolph Schildkraut
Junior Coghlan
Virginia Bradford
Frank Marion
Sam DeGrasse

Produced by DeMille Pictures Corp. Distributed by Pathé Exchange, Inc.

Photos Courtesy Pathé Exchange, Inc.

The Country Doctor

Now Portrayed on Screen

SOMEWHAT belatedly perhaps the country doctor is beginning to receive his meed of praise in poem, story and now in the moving pictures. A film just made available pictures the vicissitudes of a New England physician of an earlier day. It reveals his charity, his self-sacrifice, his broadmindedness and his leadership. It pictures the love of the community for the man who devotes himself to its problems. It serves to reproduce in motion classics of art that have brought vividly before the onlooker the service of the physician.

The plot of the story is simple. A self-sacrificing country physician in rural New England has as his greatest ambition a position as chief of the staff in a hospital to be built through the philanthropy of one of the residents of the village. In promoting a love affair between the son of the philanthropist and the daughter of a poor resident, the physician incurs the ill feeling of the donor and is surprised by the announcement that the latter has selected another physician to head the hospital.

Not content with disappointing the old doctor in this ambition, the philanthropist persecutes him by taking away most of his practice. The old doctor is compelled to plan to leave the community. As he is about to go, news is brought that the son of the philanthropist has been injured while high up in the mountains by the falling of a tree. A terrific New England snowstorm prevents easy access and the young physician funks the drive. The old doctor harnesses his horses to the sleigh and drives 5 miles up the mountain to perform an emergency operation in a woodshed by the light of the burning cabin from which he has rescued the boy. The typical happy ending reveals the old doctor as head of the hospital and responding to new calls.

Here obviously is typical movie melodrama reproducing incidents not common even in the life of the pioneer, but which nevertheless have occurred occasionally. Probably no movie scenario could adequately depict the services of the old time country doctor. This one brings to the screen at least some indication of the manner in which he labored unceasingly for little pay and under great hardships to alleviate human suffering.

How the World Gets Its Drinking Water

SICILIAN peasant girls carry water for the family as part of their regular household duties. The queer stone animal has guarded this fountain in picturesque Taormina since medieval times. Across the Mediterranean in the Algerian Sahara a constantly flowing stream furnishes drinking water for the oasis of Side Okba, shown below. The current is so swift that the water is kept clean even though the children use it for a wading pool.

TUNISIA gets its drinking water from wells like the one above, which also serves to fill the community laundry tub shown at the right of the photograph. A spouting artesian well, 3,695 feet deep, furnishes the water supply for a ranch in the dry country of western Australia. However, the operation of a water supply of this sort is extremely expensive.

MODERN water systems have no charm for the natives of Bijapur, India. They prefer their own Great Well, the largest open well in the world, which they regard as a sacred fount. Thirteen windlasses are used to draw the water.

Ewing Galloway

The Ubiquitous Washcloth

CONSIDER the washcloth! It hangs temptingly on a rack in the 5 and 10 cent store or lies on the top of a neat pile in the center of the drug store, the happy hunting ground of flies and germs, the passive repository of dust and grime. It tempts purchasers with its neat borders and its gaily colored designs, for indeed the more splendidly it is bedecked with rainbow hues the less it betrays its dirt-laden condition.

Given the requisite amount of attractiveness, its quality is investigated by fingers of uncertain cleanliness, it is tossed about by potential buyers and in all probability gets carelessly brushed onto the floor and even trodden under foot in the course of its wait for its ultimate owner.

Portrait of a young lady about to appropriate the prettiest washcloth.

Alas for its protective coloration! Even after its numerous vicissitudes it may still possess a modicum of decency in its appearance. It disappears into some shopper's handbag and goes on its way to make its debut in its new owner's bathroom. If it falls into the hands of a careful housewife, it is likely to get a bath before it enters into its new duties—yes, a good, sudsy, scrubby bath, and its appearance is thereby vastly improved. But does it make the acquaintance of a reliable disinfectant or even a kettle of boiling water? Not once in a dozen times.

Once it has taken its appointed place on the bathroom rack it is likely to be called on to do duty for the entire family; not intentionally, to be sure. It was probably dedicated to the use of little Mary, but Johnny often reaches for it because it is nearest to the washbowl and Susie likes to use it because it is prettier than hers. The washcloth surely cannot be blamed for the fact that Johnny caught Mary's cold and Susie caught both of them, for they probably borrowed each other's handkerchiefs, too.

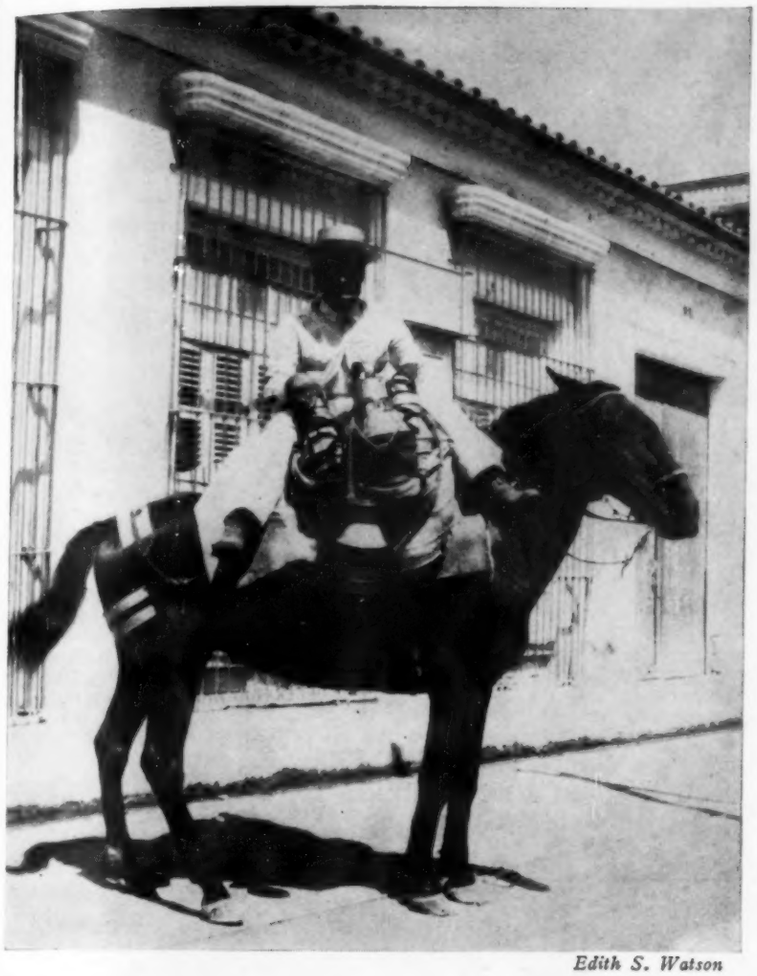
At any rate, any old washcloth may be better than none. Consider the mother I saw on the train the other day. Approaching her station, she turned her attention to the appearance of her three lively youngsters. There was no doubt but that they needed baths, only time and the absence of facilities prevented extensive ablutions. Taking each child's handkerchief in turn (thereby presumably acknowledging the laws of sanitation), she reduced them to the requisite degree of dampness with her own saliva and scrubbed the three protesting faces and six grubby hands until the supply of cleaning fluid was exhausted. It is to be hoped that the three small victims of her ill-advised efforts had already acquired an immunity to the numerous varieties of bacteria thus gratuitously scrubbed into them.

That popular if colloquial term "washrag" is only too often descriptive of an article that is deserving of greater respect. Even "face cloth" is a misnomer, for it usually follows its owner into the tub and performs its useful office from face to feet.

Washcloths really ought to travel about in pairs, bearing large labels readable even through a film of soapsuds—one "face," one "body"; but I suppose some scoffing soul would be moved to advocate a row of washcloths labeled "right foot," "left foot," "right hand," "left hand," and so on.

Treat the washcloth with respect. Initiate its period of usefulness with thorough boiling. Label it readably with the name of its owner. Hang it on its owner's rack and see that it does not stray therefrom. Wash it frequently and dry it in the sun.

Even the humble washcloth responds to careful treatment by giving longer and more efficient service.



Edith S. Watson

The Perils of Babyhood in Jamaica

By L. L. Ferard

A West Indian milkman. Señor, from much practice, has learned to hold himself and the cans in the saddle with one hand while with the other he guides his steed from door to door.

NO NEED for birth prevention in the West Indies! If a woman dies without bearing children the native population believes she is condemned to ride through hell on a white horse. A lurid but picturesque punishment!

The problem in Jamaica is, therefore, one not of birth but of death, for one fourth of all the babies die before they attain the age of 5 years. Many qualify for the well known epitaphs:

Opened his eyes,
Took a peep;
Didn't like it,
Went to sleep.

and

If so soon done for,
What was I begun for?

The climate of Jamaica is particularly well adapted to babies. Children of white parents thrive extraordinarily well, but their little black brothers and sisters are not so fortunate. Jamaica holds the unenviable reputation of having the highest infant death rate of all the British West Indian colonies.

About 36.1 per cent of the total deaths in the island are of children under 2 years of age, and 28.9 per cent are of children under 1 year. In 1922 the death rate in England and Wales per 100 births was only 12.01 of children under 5 years, and that despite the damp climate. In Jamaica for the same period it was 26.2. Statistics make dull reading, but obviously here is a deplorable waste of infant life.

What Is the Reason?

The high mortality is due to causes that are the same all the world over: lack of care before and after birth, poverty, bad food, bad housing and bad sanitation. Added to these there is also ignorance and the special diseases of the island.

Moreover about 70 per cent of the native babies are illegitimate. Members of the same family are found bearing different surnames, since it is the custom in Jamaica for children to be called after the father, who has to contribute to their maintenance.

Sometimes paternity is not easy to prove to the satisfaction of the court. In one instance a father was caught through his own pride. He refused to acknowledge or support his son. The boy grew up into a clever lad, carried off many prizes at a school function, and his praises were being sung on all sides. The father, who was present, chanced to overhear the remarks and allowing his self-conceit to outweigh discretion, called out involuntarily, "Why, that is *my* son!"

The mother won her case in court and the man had to contribute to the lad's support.

There is a popular institution in Jamaica known to the black mothers as the Screech, a not unsuitable name for a babies' crèche.

The movement, still in its infancy, was started by the women's social service. The government gives a grant of 100 pounds per year toward the working expenses. The staff consists of a matron and two nurses, and there is a babies' clinic run in connection.

The mothers are visited in their homes. There is ample scope for a health worker for about 80 per cent of the babies are syphilitic. Among the difficulties encountered in home visiting are the many superstitions, of which every country has its own variety. In Jamaica, apparently, a piece of sticking plaster placed on a baby's forehead is a widely recommended cure for hiccup.

Family life in Jamaica.

Babies are beset by numerous foes; and convulsions, as usual, are responsible for many deaths. Alastrim, too, which resembles smallpox, is prevalent, and vaccination, alas! is not compulsory.

The chief scourge of the island is hookworm; the rate of infection is as high as 90 per cent in some parts. But, thanks to the Rockefeller Foundation, this is now being fought by the Jamaica hookworm commission, which is conducting a health campaign throughout the island. Babies are liable to this infection as soon as they begin to toddle.

Education is not compulsory in all parts of the island, but school medical inspection has lately been started in some of the schools, and improvement in the learning capacity of the children after treatment for hookworm is marked.

How Far Do You Walk in a Day?

NOT all long distance hikers are sprinting along the public highways. The housewife picking up toys and wielding the dustcloth, the policeman pacing his beat and the letter carrier on his daily route are not so spectacular, but they accumulate records of their own that are astonishing in the aggregate.

An enterprising investigator for the Boston *Traveler* found that a housekeeper walks every year a distance equal to that from Boston to San Francisco. Perhaps the tired business man has a right to his title when it is considered that every three or four weeks he walks farther than from Boston to New York, exclusive of the walking he does outside his office.

An average calculated from the daily walking mileage of a diverse group of persons including salesmen, dancers, waiters, children at play, conductors, policemen, letter carriers, salesgirls and stenographers amounted to the surprising figure of 18,098 steps, or 7⅞ miles.

A doctor in a hospital walked 18 miles a day—and he used his car when he was outdoors. A salesgirl walked 8 miles in a day. A shopper in Boston walked 11 miles in the stores during the Christmas season, though the average shopper in normal times makes only 8⅓ miles.

The steward in a grill steps lively throughout the day, for his pedometer at night showed 12½ miles. Even a store manager who probably felt chained to his desk walked 6¼ miles in a day.

If golf is principally valuable for making otherwise indolent gentlemen walk, it is effective, for in playing eighteen holes the golfer walks 8½ miles.

The average school girl hikes 11½ miles in a day about her work and play, while her more active brother usually tops her record by about 4 miles. A train conductor walked 7 miles picking up tickets between Boston and Cleveland but the total was only 5 miles between Boston and Chicago.

The figures sound even more impressive when piled up by the week. A salesman covered 75 miles in his weekly rounds. A girl in a business office made 57 and a stenographer who rode to and from work still walked 43 miles in the course of a week.

Dancers work in a small area, but their mileage mounts rapidly. One registered a mile an act in vaudeville. A chorus girl registered 4½ miles a day and another dancer used up 5¼ miles between 8 o'clock and midnight.

How Your Ears Keep You Straight

By
Donald A. Laird

Wide World

Testing a future air pilot.

I HAVE shared the embarrassment of most fathers who are asked questions that goodness only knows who can answer. But last night I triumphed over what is usually the impossible.

"Why does a cat always land on its feet?"

I relaxed, for I knew the answer. Before I could say a word in explanation, however, another question was fired at me: "How can air pilots keep right side up when they are above the clouds and can see just clouds above and below?"

"See here," I had to say, "if you are going to accumulate questions, I resign."

Bud might just as well have asked a dozen more questions, for the same answer explains all. But I must not let him get the habit of asking too many at once. Usually one at a time is more than enough.

Other Questions with the Same Answer

He might as well have asked: "Why is it hazardous for deaf people to dive?" "Why does the drunk man sit up straight on the merry-go-round, in place of leaning toward the center as we do?" "How can carrier pigeons find their way back?" "How can we find our way around the yard on a pitch black night?"

"See the corner by the reading lamp," I said to Bud, who was amazed to find that one of his questions was at last being answered without consulting a shelf full of books.

"There is no cat there," he objected.

"I know. But you and I have two corners like that in our heads." His face lighted as if he were connecting this laconic statement with people he had heard called blockheads.

If a tiny doughnut no larger than a common pea were laid on the floor, tight into the corner, and if another were placed tight against the south wall with the bottom touching the one on the floor, and a third against the west wall tight against the other two, it would look something like the two corners in our heads.

These sets of semicircular canals are in the inner ears. For centuries no one knew there was anything like them in the body. Then, a few decades ago, some one discovered them. They were discovered at the time when scientists were in the habit of making grandiose generalizations from insignificant observations, so it was dogmatically stated that these semicircular canals told us from which direction sounds came. Nothing could be farther from the truth, for the canals have nothing at all to do with hearing.

Body Has a Compass

These canals are the compass of the body. They are placed so that the head cannot move a fraction of an inch in any direction without disturbing one of the canals.

The canals are tubes. Each one is filled with fluid. A slight enlargement in each canal has a few sensitive hairs connected with nerves.

When I was of Bud's age I used to try to get the froth on the top of a milk pail to move by quickly twirling the pail with my wrist. But never could I get the milk to budge. The pail would turn like lightning, but the milk lagged behind.

That is what happens in these body compasses when the head moves. The tiny canals move, but the liquid within them keeps the same position. This makes the liquid pass across the hairs in the enlargement of each canal and this stimulation is relayed to a lower nerve center by the nerves.

When we whirl around on the heel, or wind and unwind in a rope swing, or when the air pilot turns a few loops, the tiny hairs in the canals get the liquid to move slightly. I could not get the milk in the bucket to do that. Perhaps if the bucket had a ridge down the side, and if the bucket had been turned as much as the aviator's canals are, the milk would have moved.

After whirling our compasses in this way, if we come to a sudden stop the liquid keeps moving for a short while and we seem to be turning in the opposite direction. We are not, of course, turning, but it seems as if we were. This apparent backward whirling bothers aviators.

Stunt Flying

I went up with a stunt flier a few years ago. He turned a few backward loops. When we had landed he asked me if I knew how many forward loops we made after the ten backward.

"Not a one," I answered.

He could scarcely believe me.

"Didn't you feel as if we were turning forward loops?" he continued.

It had felt that way. I knew, however, that was because of the fluid in the canals backing up. If I had not known of the cause of this sensation I would have wagered my election hat that we had turned forward several times.

I have not a musical ear, but my semicircular canals work well. In many people the body compasses are as unreliable as my judgments of musical tones.

Candidates for aviation posts in the army are given special exercises to test their compasses. They are revolved swiftly and smoothly in a chair. If they are revolved at a constant speed, soon the fluid in the canals is keeping up the speed of the body, since the tufts of hairs drag it along. After a certain number of revolutions one with normal canals has the sensation that the speed is slowing and finally stopping.

It is amusing to watch a white-haired college professor turned in one of these chairs with his eyes blindfolded. Soon he says, "Now! The speed is slacking." Finally he says with finality, "The chair is now coming to a stop!" Of course, the chair is going just as fast as ever. When the actual speed of the chair is slacked the professor amazes his truth-loving acquaintances by the statement that he is being turned the other way! If it seems otherwise to him his compasses are not working properly.

The compasses have nothing to do with hearing. In some deaf people, however, the disease that has destroyed their hearing has also injured the body compasses since they are close to the organ of hearing. In these cases the sense of body position is affected. In diving or swimming under water such a person will not know which way to go to get to the top.

Carrier Pigeons

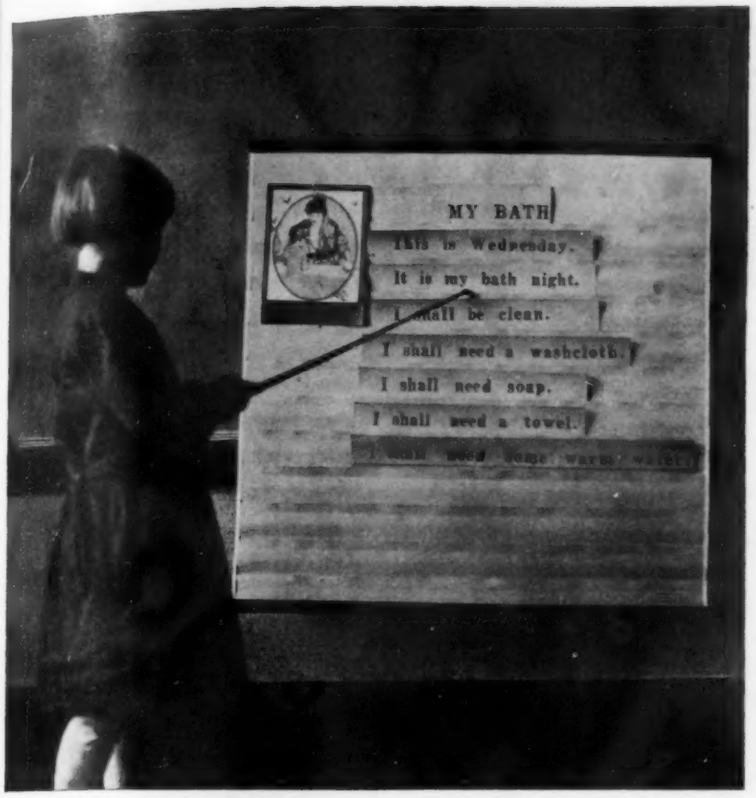
Carrier pigeons have unusually large and sensitive canals. Several years ago pigeons were experimented on by blocking first one canal and then another. When one canal was blocked they flew in circles toward the left. Blocking another made them loop the loop; blocking the third made them fly in circles to the right.

The nerve connecting with the canals does not go to the brain, where we could be made conscious of the sensations. Instead, the nerve ends in the cerebellum, a rather primitive part of the nervous system about as big as a small fist and just above the back collar button. This part of the nervous system has important control over the coordination of the muscles. It is quickly affected by alcohol. So the drunk man is unsteady because the alcohol has affected the control of the cerebellum over muscles. When on a merry-go-round he sits bolt upright because the alcohol has deadened the impressions from the body compasses.

Back in the seventh grade there was a boy who for years I thought was a coward. In an argument after school hours another boy struck at him. He dodged. He jerked his head about a foot to the left and then ducked down rapidly. The blow completely missed him. But he started to cry and maintained that he had been struck in the head.

Like thoughtless boys we taunted him for several years for being a coward. I am regretful now for my taunts, for I know that although the bully had not landed a blow, the poor boy's head had been given a severe blow on the inside by his body compass.

There is psychology even in dodging!



Simplicity in Health Teaching

By
Maud A. Brown

THE health teaching of first grade teachers of the Fargo (N. D.) public schools has had a single aim—daily observance of a complete health program. Instead of commencing with one or two essential habits and gradually working up to the whole list, the daily routine as a whole has been taught chronologically, as a story, the sequence of items of health behavior being kept always the same.

The reason for insisting on the teaching of the program as a whole, even with first-graders, is obvious. No one item of procedure can function satisfactorily in isolation. Optimum growth results only from a proper balance of all essentials. The intelligence of first-graders and their parents will reject a program that does not result in improved health. Teachers lose heart in the face of continued failure.

Perfect Faith in the Teacher

It is necessary to secure observance of a complete program for a sufficiently long time for improvement to show. This must be taken on faith at first, and the primary teacher has the advantage of the perfect faith of her children in her omniscience. They wish to do what she asks. Her problem is to keep the routine as a behavior unit so constantly before them that the sequence of association becomes indelibly fixed. This means constant vigilance on the part of the teacher to keep the drill from becoming uninteresting and distasteful. The method must be varied just before the interest lags.

The Fargo first grade teachers have not found this so large a problem as it sounds. Those who work with young children know that the demand for variety is something that adults read into children's psychology. The child rejects new stories in favor of the nightly repetition of the beloved Three Bears and reprimands the narrator at the least divergence from the customary way of telling. The morning review of the health program, for the most part, carries the year through without much need of change.

Health Throughout the Whole Day

Dramatization has proved a favorite way with most of the little folk. They will "play" the program day after day with the same shiny-eyed zest that they put into it in September, provided the teacher's interest keeps her also shiny eyed. A year of this acting out through use of the same muscles as those employed in the actual performance will make health habits automatic to the extent that each infringement will be a conscious one.

Next in importance to definite daily drill on the program of health observance comes the atmosphere of health interest that surrounds the child throughout the school day. No matter how skilfully conducted or how pleasurable the repetition of the health behavior program, if it is relegated to a certain ten or fifteen minutes of the day and then pigeonholed until the next day, it has small carry-over power. The most important, the most difficult, the thing that is impossible to achieve with perfunctory or feigned interest in the welfare of the child is the

Because of lack of space, two projects, one on "Preparation for Easter" by Edna Rost of Jefferson School and one on "Cereals" by Adaline Stevenson of Central Grades, were omitted.

keeping of the atmosphere of the classroom filled with the spirit of health, so that the child breathes it in in the course of every activity of the day. The teacher who loves her pupils cannot avoid accomplishing this, no matter how poor her pedagogic training.

There is no subject, however, in the teaching of which superior skill shows so plainly as in this subtle infusion of health reference into all the work of the day, until it seems to the child that the whole world takes for granted these simple essentials of health. I have seen this so skilfully done among this group of Fargo teachers that the child becomes literally appalled to find his own home out of step with the universe.

Not many mothers, however bridge minded, can withstand the petition, "Dear Lord, please make it so that I can go to bed at 7 o'clock."

Must Not Destroy Faith in Parents

The difficulty with the young teacher is not to gain the child's interest, but to do it with the light touch that keeps the child happy and does not destroy his faith in the parents, who for the first time display to him their human imperfections. The wise primary teacher does not try to carry this crisis alone but makes every possible effort, aided and abetted by the school physician and nurse, to enlist the mother as an ally. It is always best to give the mother the chance to make good first.

However, the relation of the primary teacher to the home is still another story. Various health essentials are touched on so simply, so incidentally and so casually that the cumulative impression on the child's mind is an immense feeling of established and taken-for-granted

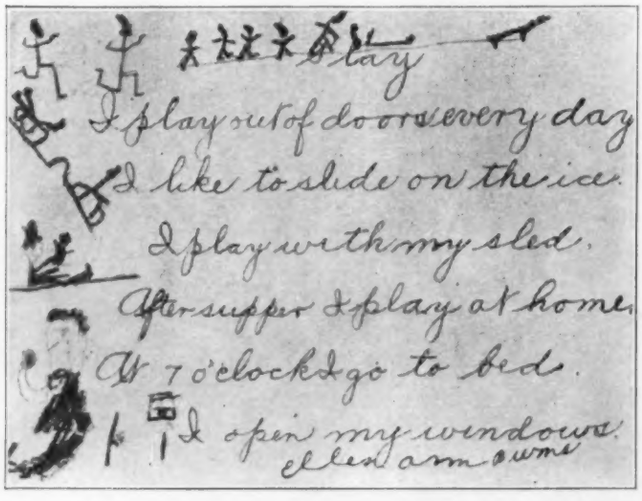

I play
I play out of doors every day
I like to slide on the ice.
I play with my sled.
After supper I play at home.
At 7 o'clock I go to bed.

Fig. 1.—A reading lesson based on everyday life instead of on the doings of a fox.

cosmic law. The more casual the reference the stronger the effect.

These teachers, then, believe in teaching health by correlation. But they believe that it is a violation of trust to the child to do this by prostitution of art, music or literary forms. Parody of classics is strictly tabooed by them. These teachers rather have included in their conversation regarding these classics health references that seem intrinsic to the subject

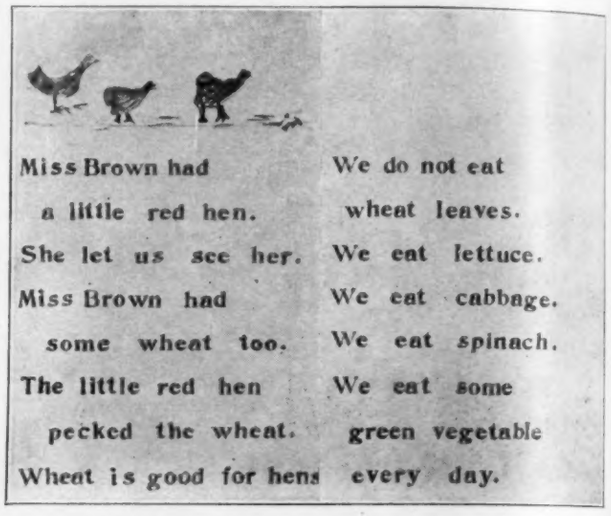


Fig. 2.—Reading sentences developed and illustrated by first-graders after a little red hen visited the classroom.

matter. Their fundamental tenet with regard to the use of other subjects as vehicles for health instruction is that the reference must be really incidental: that a health poster must be first good art; that a song must be first good music; that a reading lesson must be good literature.

A Lesson in Phonics

A lesson in phonics by Alice Cass, Horace Mann school, forms a good example of really incidental health teaching.

Purpose.—Primary purpose is to teach the sounds "oo" and "w"; secondary, to make incidental reference to sleeping with open windows.

Procedure.—Before class, prepare cards on which are printed in large type the letters "oo" and "w." Begin the lesson with a talk with the children about sleeping with open windows. This, paradoxical as the situation may seem, is one of the serious health problems on the North Dakota prairies.

"Tommy Brown always slept with his window open at night. He liked the cool fresh air blowing in. It made him sleep well and wake up bright. But one night it was raining hard and Tommy's mother said they would have to leave the window closed until the rain was over. So Tommy went to sleep. By and by he woke up. He felt hot and tired and his head ached. He wondered what was the matter. Then he heard something. It was outside and it was saying 'OO, oo, oo; let me in, Tommy, let me in. I'll make you feel better, let me in. OO, oo, oo.' (Show cards.) And what do you think it was? Yes, it was the wind, the cool fresh wind outside. Then Tommy remembered that his window was closed. No wonder he felt queer. He jumped up and opened it and let in the cool fresh air. It came, 'W, w, w,' on Tommy's hot face and filled the whole room. (Show cards.) My, it smelled good. He jumped back into bed and went right to sleep."

At the end of the narration the children played the story, one being Tommy and the rest the wind saying "OO,oo,oo,W,w,w."

Of all the subjects of the elementary curriculum, language lends itself the most naturally to the carrying of health references. These teachers find the children more interested in developing reading lessons based on everyday life than on the doings of the ubiquitous fox. Two or three examples will show how simply and naturally this works out (fig. 1). The items of the daily health program are the topics used in every case, although the children occasionally add others from some sort of recent experience.

Cooperative Compositions

The cooperative composition worked out by Edith Colwell of Woodrow Wilson school is described by her as follows:

In order to bring health teaching more definitely before the children, a semester project is chosen whereby a cooperative health composition dictated by the children is submitted each week and used as part of our regular reading material. The general plan of this project is being worked out as follows:

First Day.—Informal discussion on the topic by all the children of the class.

Second Day.—Collection of illustrative material, which usually consists of magazine pictures. Continued discussion of topic.

Third Day.—Actual dictation of the cooperative composition.

1. Individual children are encouraged to submit a sentence for this composition. These offerings are written in promiscuous fashion on the blackboard.
2. The accepted composition is then built by the children from these offerings.
3. The teacher and also three or four children each read the composition as a whole.

Fourth Day.—The composition is read again as a whole. This is followed by the children's finding certain lines mentioned by the teacher. From this we work to the individual words within the lines or sentences. The lesson is finished by having one child reread the composition as a whole.

Fifth Day.—Reading of the composition from printed sentences, which are inserted in the chart shown in the photograph (fig. 3).

The following cooperative compositions are among the number dictated by the children:

My Bath

This is Wednesday.
It is my bath night.
I shall need soap.
I shall be clean.
I shall need a wash cloth.
I shall need a towel.
I shall need some warm water.

Rest

I rest before my lunch.
I rest before my supper.
I lie down.
I close my eyes.
Soon mother calls me.
I wash my hands.
Then I eat.

Sleep

We should go to bed at 7 o'clock.
We should sleep fully twelve hours.
All the windows should be kept open.

Cereals

We eat cereals.
We like whole wheat bread.
We like oatmeal.

Old Bossy

Old Bossy is friendly.
When she comes home we know that the milk is coming.
She gives fresh milk for all.
Her milk is good for us all.
We want it at each meal.
We drink it at school.

Why We Drink Milk

Milk helps to make strong bones and strong teeth.
Milk helps to make strong muscles.
Milk helps us to grow and to weigh more.
Milk helps us to keep warm.
Milk makes us feel like working and playing.
Milk helps us to think better.

The first grade children at Agassiz school worked out, under the direction of Caroline Hodgson, a set of paragraphs that carry out the entire daily health program. They made booklets of these paragraphs and took them home. These served as reminders to the parents of the health essentials. For example:

My Breakfast

I will eat a breakfast that will make me grow.
Here is milk, cereal, fruit and buttered toast.
I will eat it all.
My toast is hard.
I will chew it well.
It will make strong teeth.
Breakfast is over.
Goodbye, Mother, I am going to school.

Dinner

Hello, Mother!
I am hungry.
My face and hands are dirty.
I will wash them.
A half hour's rest will help me grow.
My rest is over.
Mother has a good dinner ready for me.
She has spinach, mashed potatoes, tomatoes, brown bread and butter, milk and custard.
I will eat some of each and drink my milk.

The stories end with the Rules of the Game, which are, of course, learned by the children.

The first printed story used by the first-graders is "The Little Red Hen." This lends itself well to incidental health references. A real Rhode Island Red visited the rooms last year, in company with the supervisor. She (the hen) showed an adaptability not commonly credited to galliform intelligence, chatting with the children in a companionable cackle as she ate her whole wheat cereal and as a last evidence of sophistication laying an egg in the box as she jolted in the flivver between schools. The hen and her babies, which visited the same children in the spring, appeared in various outcroppings in the work of the primary rooms. The reading sentences (fig. 2) developed by the 1-B pupils of Edna Rost of Jefferson school are illustrated by their own drawings.

Teacher's Interest Must Keep Fresh

Another teacher who finds that children do not need elaborate and frequently changed devices to hold their interest is Amanda Scheie of Lincoln school. The simple plan shown at the beginning of the article for reporting on the points of the daily health program carries on month after month throughout the school year with undiminished interest. The child in the photograph is reporting on her health behavior for the previous day by pointing to the corresponding illustrations. The pictures selected for this set included fruits, vegetables and other wholesome foods, so the child might be able to give a complete report of his daily dietary.

This daily review was made an oral language exercise by having the statements made in complete sentences, by conversations regarding health topics suggested by the children's reports and by games such as getting ready for a picnic. It goes without saying that the teacher's interest is fresh each morning of the year, otherwise the plan would wear stale in a week. This carrying on of the same devices and the simplicity of the devices used in the different

rooms seem good evidence that the interest of the child is in the thing itself, not in the device.

A popular use of cut-out pictures is that of mounting pictures of wholesome foods with pasted-on paper folds to make them stand up. These are used in a great variety of ways. The 1-B's of Irene Borchert of McKinley school enjoy their use in silent reading lessons. The printed sentence giving the act to be performed is shown for a moment and the children designated carry out directions. In this enjoyable fashion they acquire along with their reading proper habits of selection of food, setting the table and behavior at the table.

Gudrid Njaa finds that the children's imaginations dispense even with the pictures and

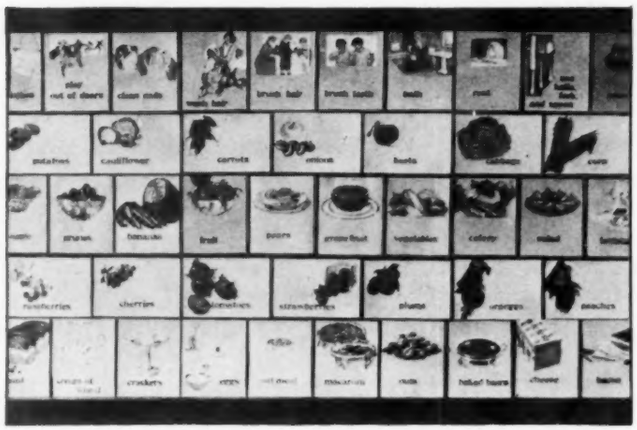


Fig. 3.—Children plan wholesome breakfast menus from pictured foods.

achieve the same result with equal zest with only "stand-up" words. In the teaching of reading, she prints the words, as her first-graders acquire them, on cardboard with a fold of stiff paper pasted on the back to make them stand up. The children carry out the dramatization of the breakfast routine, the setting of the table, the choice of foods and the mannerly partaking of it with these words, with apparently the same enjoyment and sense of reality as with pictures or plasticene models.

Silent seat work lends itself well to health subject matter. The sentences shown below are selected from sets developed by Louise Hansen of Hawthorne school.

Simple "true and false tests" are of great interest to these little people.

We should eat fast.
We should eat slowly.

I wash my hands and face before breakfast.
I wash my hands and face after breakfast.

We should play in the house.
We should play out of doors.

We should go to bed at 7 o'clock.
We should go to bed at 10 o'clock.

The review of the daily health program is varied by silent reading sentences such as the following. The card is shown and the children answer in pantomime.

Show how you wash your hands.
Show how you brush your hair.
Show how you blow your nose.
Show how you brush your teeth.
Show how you sneeze.
Show how you wash your face.

Another excellent use of pictures for silent seat work is shown in figure 4, one of the picture puzzles made by Katie Lobben.

A description in Miss Lobben's words of a butter-making project is quoted in full. The use of milk and milk products had been so thoroughly emphasized by her that all but one of the children were actually using an adequate amount.

During the spring we had worked out a farm project. Then as a culmination of this, we had discussed milk and its products. When we spoke of cream and butter-making, one little boy spoke up saying, "My brother said they churned butter in your room last year." "Yes, we did," I said. "Would you like to make some this year?" They were eager to do so. The next day I brought two quarts of good cream. Two little girls brought toy churns from home.

First we talked about the condition of the cream for churning and then the different ways of churning—dasher churn, barrel churn, and a "big machine churn," as one little boy whose father works in a creamery expressed it.

We had three pint Mason jars besides the two toy churns. These the pupils washed in warm water, filled half full of cream and then took turns at shaking the jars and working the dasher in the churns, saying as they did this:

"Come, butter, come.
Come, butter, come.
Johnnie's at the garden gate,
Waiting for a buttered cake.
Come, butter, come."

The pupils were delighted when they saw the cream changing in the jars. I asked what to do next, and some one said, "Pour off the buttermilk." We did this and washed the butter many times. When this was done, I gave them each a clean toothpick to taste it. There were quite a number of disappointed looks as they tasted the butter. One little girl said, "This doesn't taste like butter."

"What is the matter?" I said. They gave various answers. Finally one little girl said, "It isn't salty."

"We will try to salt it," I said. So Robert was sent to the Domestic Science room for salt. Then we worked in the salt and tasted it again.

"Now it tastes like real butter," was the remark heard.

"It is much better than the butter we have at home," some one said.

Then I said, "That may be because it is fresh and made from very good cream."

We folded cups and tasted the buttermilk. Some liked it and some didn't. Our butter was placed in the icebox, as we decided to use it at our mothers' party on Friday.

In the afternoon when we had our reading class, we decided it would be nice to make a lesson about our butter churning for our health book.

The project culminated in furnishing refreshments for the mothers' party. These parties are a favorite plan of the primary teachers for con-

necting the home with the classroom. The trouble, they feel, is more than compensated for in the mutual understanding promoted. The parties are apt to feature some healthful item of the dietary that is not altogether appreciated. Carrot parties, spinach parties, cottage cheese parties, cereal parties and lettuce parties are frequently encountered.

Fig. 4.—Picture puzzle for silent seat work.

The refreshments for the mothers' party in Miss Lobben's room used the butter made in the project and featured also a salad of dandelion leaves, which were just at the edible stage. As a consequence, an inexpensive and delicious green salad made its appearance on a good many tables that week for the first time. Health figured prominently as a topic among the songs, plays and rhymes that entertained the visiting mothers. The arrangements for the party, the making of the salad and sandwiches, the making of the aprons for the waiters and the serving of the refreshments tied the whole together into a real organized project.

One of the most important purposes achieved by these parties is that the children and the mothers find that wholesome food charmingly served and daintily partaken of is just as satisfactory a treat as sweets, the overindulgence in which forms our great national dietary sin.

Mother Goose rhymes, which form part of the reading course for the first grade, are used in many legitimate ways by this group in emphasizing health instruction, the aim being always to keep the moral subsidiary to the poem. "Jack and Jill" is read by the 1-A's of Louise Hansen's room at Hawthorne school. A socialized recitation brings out casually without overemphasis, and in a beautifully natural manner impossible to reproduce, speculation as to the probable uses to which Jack and Jill put the water. For what did Jack and Jill need water? To drink. To wash in. To take a bath. To wash clothes. To wash dishes. How much did they need for drinking? Four glasses. When did they wash? Before meals. After going to the toilet. When they got up. Before they went to bed. How often did they take baths? At least once a week.

Adelaide Wilson of Roosevelt grade school uses effectively the Mother Goose motive in a correlation of health, language, penmanship and art. The rhymes were reviewed until all the children knew them. They were then copied as an exercise in penmanship. As an oral language lesson, the story of each rhyme was discussed, and the children drew health inferences from each. These were again written as a penmanship exercise, and the papers saved (fig. 5). In the next health period the health statements were discussed and the best of them saved by each child for his booklet, which was being prepared in the art period. This combined the use of lettering and free-hand cutting, both of which are included in the regular art work for the grade.

A somewhat more imaginative use of Mother Goose is made by Katherine Barrett of the Hawthorne school in her first grade room. After the rhymes are orally recited and health references developed in informal talks, these children end the term by playing a game, which is a choice bit of dramatization developed by the skilful use of suggestion by the teacher. Mother Goose has a party to which all her children who are obeying health rules are invited. The real mothers constitute the audience. Each child recites his or her own rhyme and tells why he is entitled to come to the health party. The game ends with a real party of milk with lettuce and peanut butter sandwiches.

Of course it is impossible to tell just what impressions are being made on their plastic minds. Perhaps in later years these children subjected to association tests will surprise the

Fig. 5.—Use of the Mother Goose motive in a correlation of health, language, penmanship and art.

psychologist by recording after Muffet, teeth, and after candle-stick, milk. This would constitute a final "thumbs down" on this use of correlation in instruction. At present, however, it seems hair splitting to deny ourselves all imaginative vehicles for health drill for little folk.

HYGEIA
THE HEALTH MAGAZINE
Published by the American Medical Association
535 North Dearborn Street, Chicago

Plain Facts about Health and Disease

HEALTH NEWS OF THE MONTH

Highway Accidents

During the five years ending with 1927, according to a report by Charles M. Upham, director of the American Road Builders Association, 3,446,370 persons were injured and 114,879 killed in traffic accidents in the United States. In other words, every forty-one seconds some one is either killed or injured in a highway accident in this country.

The investigation reveals the fact that the largest number of accidents occur between 5 and 6 o'clock in the afternoon, when people are on their way home after the day's work. Most of the accidents involved pedestrians, the number of collisions between automobiles decreasing regularly. Less than 5 per cent of the accidents seem to be the result of faults with the vehicles or with the roads and streets on which they may be driven. Seven thousand deaths occur annually in children of school age, affecting those between the ages of 6 and 12 more than any others.

From the study of these figures it seems likely that carelessness and incompetent driving are the factors of greatest importance to be overcome—this refers not only to the children but also to the adults. The building of better roads, the elimination of grade crossings, the widening of streets, the use of traffic signals and the establishment of safety zones, all will be helpful in lowering this tremendous accident and mortality rate, but education in safe walking and attention urged toward carefulness are more needed than the improvements that have been mentioned.

The American Road Builders Association has prepared a pledge card for those who wish to endorse the movement for greater highway safety. It is a reminder toward the observance of traffic regulations and toward the constant use of courtesy and caution. It is a significant fact that the motorist who has once accidentally injured or killed another human being is likely to regret the accident forever after, regardless of the extent to which he himself may have been responsible. It is better to be careful than to be sorry.

Hard-of-Hearing Children

The bureau of education of the Department of the Interior has just made available in pamphlet form a report of the commission of education of the American Federation of Organizations for the Hard of Hearing. This commission devoted more than two years to a study of problems in this field seeking to find the best means of detecting impaired hearing in children and giving such children medical treatment and proper educational treatment. The commission found that the phonographic audiometer is probably the best method now available for testing the hearing of school children, particularly as the rough and ready methods formerly used, including watch-ticking tests and whispering tests, must be performed by experienced specialists and are in any event not nearly so accurate as the use of the phonographic audiometer.

When it is discovered that a child is hard of hearing, a record should be kept of the extent of the condition and the teacher advised of the nature and the amount of the deficiency. It is also recommended that such a child be given a front seat in the class, that he be placed preferably in a room free from confusing noises, that the teacher take care to speak distinctly and with her face in a good light, and that the child be assigned to a speech reading class if such classes are available. The parents or guardian should be told of the defect and advised to take the child to a competent specialist in diseases of the ear. The child

should also be tested every year to determine whether the condition is improving or is gradually becoming more acute.

When children are found to have a hearing loss of from 12 to 15 per cent, special examinations and care are needed. In attempts to overcome the difficulties, teachers are being developed who go from school to school giving instructions in speech reading to the children. Some large schools have organized special classes. Six universities now give courses for teachers in speech reading. Apparently about fifty teachers are now engaged in public school work for hard-of-hearing children in the entire country.

The problem is not so difficult to handle in the city schools, but a special system that will meet the needs of rural schools has not yet been developed. This should be the next step in the program.

Arsenic Preparations Contaminate Fruit

In various sections of this country, in Great Britain and in some other countries there are already laws against the sale of fruit containing more than a trace of arsenic or arsenic preparations. At this season of the year, when apples are being harvested, as is pointed out by the *Oil, Paint and Drug Reporter,* farmers are beginning the use of arsenical preparations to kill the codling moth and other pests that may attack the crops. These pests remain until the fruit has practically ripened, so that there is always the possibility that some of the arsenic may remain on the fruit when it is packed and made ready for shipment.

In a cooperative effort between the manufacturers of insecticides and the U. S. Food Administration it was suggested that the makers and sellers of arsenical products urge users to refrain from immoderate use of lead arsenate and to discontinue the use of such products when the fruit is almost ripe. Fruit growers are also advised to adopt some method of removing residues of arsenic from the apples before packing them for the market.

One of the methods that has been suggested is the washing of the fruit with a dilute solution of hydrochloric acid. This removes the arsenic without bringing about any injury to the fruit.

Attempts are being made to find insecticides that will not contain arsenic, but efforts thus far have been without success. The ordinary citizen will do well to wash and clean the fruit thoroughly before using it or eating it raw.

M. F.

AMERICAN EDUCATION WEEK

IN EARLIER days it was the custom, especially in rural communities, for parents to visit the schools their children attended and to take an active interest in the school work. The country school teacher "boarded around" and in this way became intimately acquainted with pupils, parents and home conditions. There were objectionable features to this arrangement but it did secure that better understanding and more effective cooperation between home and school that is and always will be indispensable to the production of the best results in a school system.

The multiple duties and distractions of modern life have made this frequent contact between parent and teacher difficult and often impossible. There has been a growing tendency to foist onto the school duties in the training of children that belong rightfully to the home. Substitution in the cities of flats and apartments for detached homes has made it more and more difficult to maintain a healthy home life. Moreover, the science of pedagogics has been growing by leaps and bounds, and educational methods are becoming more effective with new aims and purposes.

Every parent and every citizen should have some knowledge of what is being done in the schools and should lend his hearty, intelligent support to their maintenance and advancement. To this end the National Education Association, with a membership of nearly 200,000 teachers, and the American Legion, determined to bring about a diminution in the appalling amount of illiteracy revealed by the draft board examinations in connection with the World War, have staged an annual celebration of American Education Week. This year it takes place during the week of November 7-13. Other national organizations are cooperating; among them, the American Medical Association, the American Bar Association, the National Congress of Parents and Teachers.

The several days are to be devoted to the following topics: Monday, Health Day; Tuesday, Home and School Day; Wednesday, "Know Your School Day"; Thursday, School Opportunity Day; Friday, November 11, Armistice Day; Saturday, Community Day, and Sunday, For God and Country Day.

The great purpose of Education Week is to acquaint the public with the work of the schools and their needs. A detailed program has been prepared for each of these days, with a wealth of suggestions as to how the work of the schools can be brought most effectively to the attention of the people of each community.

This is becoming a world movement and widespread interest was expressed by representatives of the many nations in attendance on the World Federation of National Education Associations held in Toronto, August 7-12.

It is significant that health, a fundamental topic of the school program, is assigned to the first day of Education Week. J. M. D.

CHANGING ASPECTS OF HUMAN DISEASE

TIME changes and we with time. Just as the civilized man of today varies from the one of the Stone Age and of earlier periods, so also the diseases that afflict mankind have changed their nature with the passage of years. The variations in disease from the historical point of view were recently discussed by Sir Humphrey Rolleston, professor of medicine in the University of Cambridge, England, in an address before the historical section of the British Medical Association. He called attention particularly to the investigations now being made by many students of diseases found in the bodies of animals of the prehuman period, at least 500,000 years ago.

Examination of Egyptian mummies, dating from 2900 B.C., revealed the presence of tuberculous disease of the bone, of mastoid infection of the bone behind the ear, of cases of water on the brain, inflammations of the joints, gout, pyorrhea, pneumonia, abscess of the kidney, hardening of the liver, gallstones and many other conditions. The disease known as rickets and the venereal disease syphilis were not found in Egyptian mummies, perhaps because the diet of the Egyptians and exposure to sunlight were such as to prevent the development of rickets. Syphilis was apparently not known to the eastern hemisphere at that time, but was brought from America to that portion of the world by the returning sailors of Columbus in 1492.

Smallpox today is a much milder disorder than the one that wiped out communities hundreds of years ago. Leprosy, which was the great affliction of the past, is confined to relatively few areas. Most of the cases in the United States are in the leprosarium at Carville, La., which has a population of somewhat less than 300 lepers.

When the great influenza epidemic swept over the world in 1918 and 1919, it was commonly compared with the plague that destroyed perhaps forty million lives in the fifteenth and sixteenth centuries. Nevertheless, modern observers are disinclined to believe that the influenza of recent years actually was the great plague of the past.

Scarlet fever, which was serious and malignant forty or fifty years ago, is today an apparently mild disorder. Furthermore, it can now be controlled through the use of the Dick antitoxin.

It is not difficult to believe that germs, which are living organisms, change their character with the surroundings in which they live and with their passage through various human bodies. The changing habits and diet of man provide the germ with a different type of soil on which to thrive.

Appendicitis has become much commoner in the past fifty years. It existed probably before it was first definitely identified by Fitz of Boston in 1886. Perhaps its increasing incidence is due to change in diet, but possibly it is merely being recognized more often.

One disease is almost completely eliminated: the condition known as chlorosis, formerly called the "green sickness" of young girls. It was a form of secondary anemia due to the secluded and sheltered life of the past. Today indulgence in outdoor sports, common sense diet, and change of style in both food and clothing of girls have practically eliminated this disease. M. F.

SKIMMED SUNSHINE

SKIMMED milk no longer appears on the family dinner table but skimmed sunshine is the only kind admitted to the average home. The real cream of the sun's rays is the ultraviolet rays, but ordinary window glass or plate glass excludes these rays with health-giving properties. That is the reason HYGEIA and the family doctor place so much emphasis on being outdoors. Mothers are urged to give their babies sun baths and office workers are exhorted to spend their leisure time in the open air and sunlight. Scientists say that the person who lives in the open air receives a million times more ultraviolet radiation than he who lives behind the transparent window pane.

Recent developments in the manufacture of glass have brought on the market several types of glass that do not filter out the ultraviolet rays. When this glass is installed in schoolrooms, tests show a remarkable gain in the weight and height of the children and an increase in the number of red corpuscles. A number of hospitals and sanatoriums in this country and Great Britain have been quick to install this glass in their solariums and even in the patients' rooms. It is also meeting with favor among

informed home owners, especially among those with young children in the family.

Chicago lays claim to the first hotel to install any of this new type of window glass in its guest rooms. The living room windows in each suite in the eighteen story building are of one type of this glass found by the council on physical therapy of the American Medical Association to be efficient for the purpose. Although the hotel management does not believe that a hotel furnishes the proper environment for bringing up children, it is stressing the special window glass feature in renting to families that include elderly persons, who need the valuable effects on health to be obtained from the ultraviolet rays and who are not able to be out in the sunshine much of the day, particularly during the winter season. M. W.

MODIFIED BIRTH WEIGHT OF BABIES

SOME physicians recommend to the prospective mother that her own appetite is a fairly trustworthy guide as to the amount of food she should eat. Many grandmothers believe that it is necessary for the prospective mother to eat for two, since the infant obviously must thrive on the mother's body. A few physicians have advised that the prospective mother limit her diet greatly with the idea that a lowered consumption of food will make a smaller infant and, therefore, an easier birth.

Modern American diet is modified by all sorts of contingencies. We live largely on packaged and prepared foods. We seek the soda fountain and the candy store because of their alluring temptations. As Dr. J. M. Slemons has pointed out, it is not safe to leave the choice of a proper diet to the mother's appetite. If the gain in weight is too rapid, the food consumption should be regulated and the only way to determine whether or not there is a gain of weight is to weigh the patient regularly. Women who take on weight excessively are likely to have a more difficult time than those who remain fairly close to their usual weight.

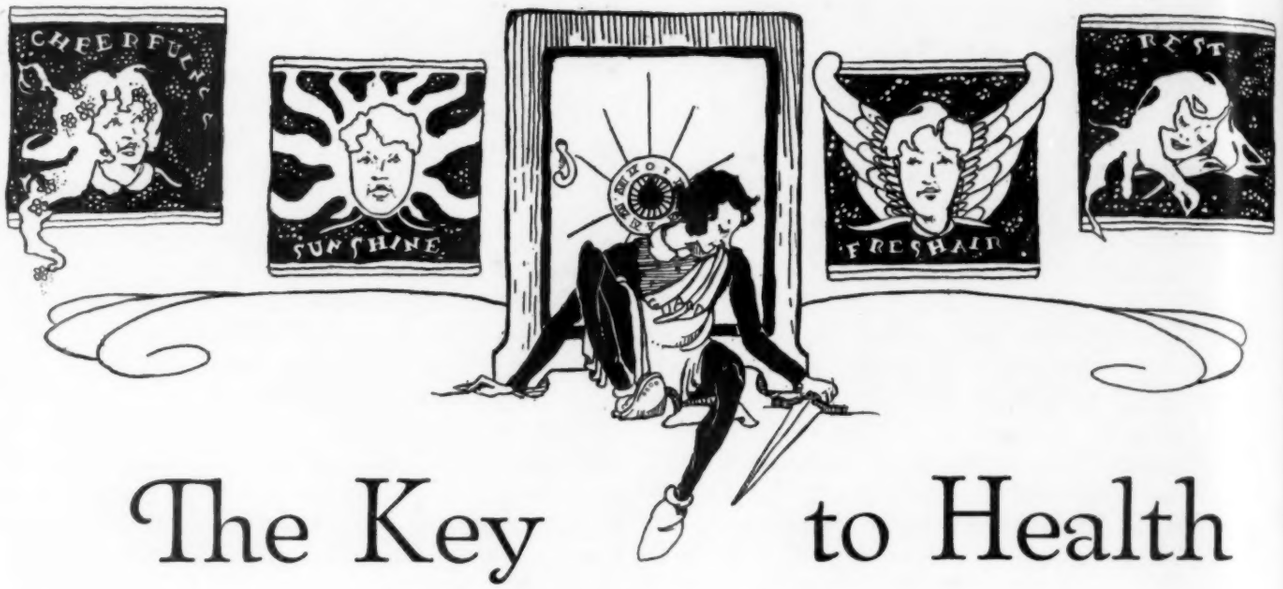
A normal increase of weight would be approximately 12 pounds, which would cover the additional weight of the child and the accessory surroundings. If additional allowance is made for the changes in the mother's body associated with prospective nursing, another 3 pounds may be added, making a total gain of 15 pounds as a normal increase. The tendency of many mothers is to put on excessive weight as a sort of reserve.

Dr. Slemons recommends the elimination of candy, cake, pastry, pie and other rich desserts from the diet of the prospective mother. Milk may be taken at will in the early months but is eliminated in the second half of the period. During the second half, Dr. Slemons recommends the following program:

Breakfast: Coffee or tea with toast and very little butter.
Midmorning: A cereal with milk, no cream.
Luncheon: Bread with an egg, or soup or salad.
Midafternoon: Orange juice, tea, or bouillon and crackers.
Dinner: One chop or the equivalent of some other meat; two vegetables, in moderate quantity and without a second helping; a simple dessert, preferably fruit.

Such a diet includes approximately 2,000 calories and meets the patient's needs. Five hundred patients who followed this method were studied. It was found that the average gain in the mother's weight was 16½ pounds and the average weight of the baby 7¼ pounds.

A well known European physician suggested that the size of the baby could be limited by limiting greatly the diet of the mother. A careful investigation has shown that the baby's weight cannot be wholly regulated by the mother's diet. Besides the food the mother consumes, other factors enter into this question. Careful dieting does prevent extraordinary overgrowth and to this extent it may lessen the hazard to the mother. M. F.



The Key to Health

By S. B. McCready

CAST OF CHARACTERS

OLD TRAVELER in search of the secret of health
THE TREASURE in the safe (a little girl or boy)
KEEPER OF THE KEY
HIS PAGE
ATTENDANTS ON THE KEEPER:

SUNSHINE	TEMPERANCE
FRESH AIR	CLOTHING
REST	FOOD
GOOD POSTURE	EXERCISE
CLEANLINESS	CHEERFULNESS

SCENE: A room in the Temple of Health with a safe in the center showing a special combination of health principles. The front of the safe may be made of a sheet of beaver board that hinges on a large box. Pupils will do the lettering.

SCENE I

[*The Keeper of the Key is lying at rest before the safe. A stumbling and fumbling with muttering is heard outside the door. The Keeper of the Key stirs, partly rises and listens. Then there is a knock on the door. The Keeper springs up, adjusts his helmet and tunic, feels if the key is safe in its hidden pocket, seizes his sword and shield, and marches to the door.*]

KEEPER: Who goes there?

OLD TRAVELER *(in quavering tones):* It is I, a weary old man. I have come a long way, seeking shelter, simple food, rest and—a secret!

KEEPER *(opening the door):* In the name of mercy, enter.

OLD TRAVELER *(stumbling in and tottering with Keeper's support to a chair):* In God's name, thanks, good sir. I have come a weary way indeed *(looking about the room)*, and the secret always eludes me.

KEEPER *(speaking as he prepares a bowl of bread and milk):* Never mind the secret now. Wait until you have had a bite to eat. Secrets can wait, but an empty stomach cannot. Here, take this. *(He gives the Old Traveler the bowl.)*

OLD TRAVELER *(smacking his lips and eating hungrily; between sups):* Hunger is a great sauce. Man, but bread and milk is good! It makes me think of my boyhood and my mother's kind ways. *(Finishes the food and leans back refreshed. Looks around, sees the safe, starts up and exclaims excitedly.)* What's that? Oh, good sir, is it the secret that I have long sought? Oh, the secret! *(Sinks back exhausted.)*

KEEPER *(going over to Old Traveler and putting his hand on his shoulder kindly):* My dear old man, never mind about the secret now. As I said before, secrets can wait. You sorely need a good rest. Stretch yourself here and sleep. You do not need to feel any fear. When morning comes we shall talk about your secret. Just now make yourself comfortable here. *(Spreads a rug on the floor, helps Old Traveler to lie down, covers him, watches over him for a while. The weary eyes soon close and the Keeper returns to lie on guard before the safe.)*

KEEPER *(to himself):* Yes, there are many who search! *(Sleeps.)*

CURTAIN

SCENE II

[*Keeper and Old Traveler are finishing breakfast. Old Traveler is greatly refreshed and interested.*]

OLD TRAVELER: Do you really mean to tell me, good sir, that the secret about the treasure that I have long searched for is there? *(Pointing to safe.)*

KEEPER: Indeed I do! And I have the key here. *(Placing his hand over his breast.)* And now that you are feeling strong again, I am going to reward your diligence and disclose the secret to you. *(Claps his hands. The Page enters, bows to the Keeper, and then to Old Traveler.)*

KEEPER: Master Ralph, summon to me my good helpers.

MASTER RALPH: That will not be difficult, sir. They are without and await your bidding. *(Goes to the door and blows his trumpet. Immediately the Attendants scamper in, laughing and romping about the Page. Then they notice Old Traveler, sober down immediately and make a low bow before the old man.)*

KEEPER: Now my lads and lasses, Fortune has brought this seeker for the secret of health to our portals and I have promised to reward his long search. Allow me to introduce you. This, sir, is Sunshine. He is indeed a powerful ally of mine. This, sir, is Fresh Air, another of Nature's blessings. This, sir, is Rest. He may look a bit slow and lazy but I assure you we could not well open the safe without him. *(Keeper introduces the rest in the same way. The attendants line themselves up on either side of Old Traveler.)*

KEEPER: And now that you have met one another, we will get to work. *(Takes his place beside the safe, draws forth the key, and speaks impressively.)* Lads, work the combination. *(Each in turn steps forward to the safe and before moving the index on the dial turns and addresses Old Traveler, who has come toward the safe and stands watching intently and at times excitedly.)*

SUNSHINE: Sir, you do not need to be told of my place in the affairs of men. I am Sunshine. I create and I destroy. Without me there can be no warmth in the world, no green things, no food. In my absence, harmful germs grow and disease thrives. At present, I am roused to fight tuberculosis, the white plague. And so I do my share to disclose to you the secret. *(Moves the indicator on the dial to 1, salutes Keeper and Old Traveler and takes his place in the line again.)*

FRESH AIR: Sir, I am Fresh Air. With Sunshine, I work for the health of mankind. In your travels you no doubt have seen many poor mortals who shut themselves up in overheated houses and never open their windows at night. *(Moves the indicator to 2.)*

REST: Sir, I am Rest. I am a partner of Sleep, Nature's great restorer. We are menders and healers. Too few people know our powers. Too many ignore us to their hurt. It is a law of life that rest must follow effort. Play after work; rest after toil. And so I help to reveal the secret. *(Advances the indicator on the dial to the next position.)*

GOOD POSTURE: Sir, I am Good Posture. Many unfortunates do not know that I hold in my hands much of the gift of health. Bowed in their slouching, they cannot see clearly ahead. Oh, if I could only get boys and girls to stand and sit and grow erect! Of such Tennyson sings, "Iron-jointed, supple-sinewed, they shall leap and they shall run!" And so I share in the unlocking of the secret. *(Advances the indicator.)*

CLEANLINESS: Sir, I am Cleanliness. One of the great wars of the ages has been for the things I stand for—clean hands, clean speech, clean hearts. I am the avowed enemy of filth. I hate it. I would destroy it. Steadily the war is being won but there are many campaigns and many battles still ahead. Let all good folk stand by! *(Advances the indicator.)*

TEMPERANCE: Sir, I am Temperance. Let no man think he can find the secret of health without me. Woe to the poor mortal that puts himself into the clutches of King Alcohol! His lot shall be slavery and poverty, sorrow to his home and disgrace to his family. "Oh, that men should put an enemy in their mouths to steal away their brains!" Without Temperance the

secret cannot be disclosed. *(Advances the indicator.)*

CLOTHING: Sir, I represent another human need, Clothing. My chief service is to protect poor human beings from winds and rain, heat and cold. Though many seem to think that adornment is my chief concern, it is not so. Of all my services, may I say that the keeping of the feet dry with good shoes or rubbers is one of the most important. Neglected wet feet are one of the commonest causes of sickness. Let all people dress wisely! *(Advances the indicator.)*

FOOD: Sir, I am Food. For me all the world works; farmers plow and sow and reap; engines haul and mills grind; fathers toil and mothers bake. Wisely used, I give health and strength. Used unwisely, I punish my victim with an inescapable hand. In thankfulness for our daily bread let us lend a helping hand to those who are in need. *(Advances the indicator.)*

EXERCISE: Sir, I am Exercise. Through me boys and girls keep themselves fit. For older people, I am no less necessary. Without me, muscles grow flabby and the tone of the body slumps. I am found in play and in work. I thrive best in the open air and sunshine. I am one of life's indispensables. *(Advances the indicator.)*

CHEERFULNESS: Sir, I am Cheerfulness. I am the child of Thankful Heart and full cousin to Friendliness. The Golden Rule is my best friend. I can explain my place in the plan of life with these verses, which my mother taught me long ago:

"Father, we thank Thee for the night
And for the pleasant morning light,
For rest and food and loving care,
And all that makes the world so fair.

"Help us to do the things we should,
To be to others kind and good.
In all we do, in work or play,
To grow more loving every day."

And so I complete the working of the combination. *(Advances the indicator. Cheerfulness having completed the working of the combination, Keeper steps forward with the key, but before unlocking and opening the door he addresses his Attendants.)*

KEEPER: Thank you, my good helpers, for assisting me to reveal the secret to this worthy seeker. None of you has made a mistake. The combination is released. Now my key will open the door. Had one of you been absent or had one of you made a mistake, this key would have no power to open the safe. See, it works. *(Swings door open dramatically. A chubby little boy or girl is disclosed asleep.)*

OLD TRAVELER *(in ecstasy)*: Oh, how beautiful! How wonderful! How precious! And so I have found the secret. But how can a child possess the secret of health?

KEEPER: Let the child himself tell you. *(Wakens the child, who yawns, stretches, stares at Keeper, Attendants and Old Traveler then tumbles out and bows to all.)*

KEEPER: Come, lad, wake up and tell this Old Traveler the secret of health.

LAD: Secret, is it? Not much of a secret! Why, it is printed for all who read in the Junior Red Cross Rules of the Health Game. *(Displays Junior Red Cross poster.)*

OLD TRAVELER *(takes the poster and reads it impressively)*:

1. Wash the hands before touching food, and after using the toilet.
2. Keep the finger nails clean.
3. Brush the teeth every night and every morning.
4. Take a warm bath at least once a week.
5. Use a handkerchief over the mouth when coughing or sneezing.
6. Do not spit.
7. Keep fingers, pencils, pens, erasers, and rulers away from mouth and nose.
8. Hold the body straight while sitting and standing.
9. Drink plenty of water every day, but no tea or coffee.
10. Eat plenty of vegetables and fresh fruit every day, but not much meat.
11. Play out of doors every day.
12. Sleep with the windows open. Be in bed at least ten hours every night.

And is that the secret? So simple! To think I have searched so far for something that was so near! May I have this to show my friends?

KEEPER: Surely! You are indeed welcome to it.

OLD TRAVELER *(addressing all)*: Good friends all, how can I thank you? To think the secret of health is simply playing the health game! [*Procession or march.*]

New Books *on* Health

Reviews of Interest to General Reader, Parent and Teacher

PRINCIPLES OF PHYSICAL EDUCATION

By Jesse Feiring Williams, M.D. Pp. 375. Illustrated. Price, $2. W. B. Saunders Company, Philadelphia, 1927.

THE popularity of Dr. Williams' book "Personal Hygiene Applied" is sufficient warrant for more than the usual amount of attention to his new book. He writes fearlessly, conservatively and scientifically in matters of health. He is abreast of modern knowledge and yet maintains a sound and conservative point of view. In his preface he points out succinctly the confusion that exists relative to health education and physical education. Health education has to do with hygiene and the prevention of disease; physical education concerns the use of the human body in activities that bring satisfaction, with health as a byproduct.

After some excellent chapters defining the nature of physical education and the need for competent teachers, the relations of life to physical education, the nature of man and his growth and the history of his subject, Dr. Williams takes up the place and aims of physical education in American life. His sound conclusion is that "physical education should aim to provide skilled leadership and adequate facilities that will afford an opportunity for the individual or group to act in situations that are physically wholesome, mentally stimulating and satisfying, and socially sound."

The chapter on objectives provides some analysis of highly unfavorable results of intercollegiate sport, including undue development of certain muscular and organic systems, elaborate training tables, widespread advertising of stars leading to egotistic abnormalities, varying standards of conduct by players as a result of eagerness to win at all costs, and lack of acceptance and practice by coaches of the best traditional standards of society. These are but a few of the significant faults with present intercollegiate sport activities. The three concluding chapters describe some better objectives, consider various methods and provide a system of standards for judging results.

The physical culture fetish has made a thesis like that of Dr. Williams a necessity. Man does not live for muscles or for sport alone. In this as in all other human activities there is a healthful middle ground that forms rationality. Our educators are all too frequently carried away in the mob's rush for athletic superiority and in its admiration for brawn. The spectacle of a nation changing its point of view four times in as many years in relation to a Dempsey is sufficient to cause a thinking man to ponder. Dr. Williams' thesis will give additional food for thought.

MORRIS FISHBEIN, M.D.

LISTER AS I KNEW HIM

By John Rudd Leeson, M.D. Cloth. Price, $3. Pp. 212, 6 illustrations. William Wood & Company, New York. 1927.

THOSE readers who were interested in the brief sketch accompanying the medallion of Sir Joseph Jackson Lister that was printed in HYGEIA for April, 1927, should read this delightful story of "Lister as I Knew Him," written by one of his dressers and surgical clerks, who was his friend for many years.

The medical career of the author began in London at the St. Thomas Hospital, which just then occupied an ideal site, with new buildings providing ample light and ventilation and designed to do away with what was then known as hospitalism. It was common knowledge that pyemia, septicemia and erysipelas were always present wherever the sick were congregated. The dreadful hospital gangrene was frequent and the consequent mortality enormous. At times more than half of the women in the maternity department of the hospital died of child-bed, or puerperal, fever, a septic disease. These surgical infections were called dirt diseases and hope beat high that in this new and clean hospital with new furniture and a new system of nursing hospitalism would cease. But the old enemies were soon rife. It had not yet dawned on the mind of any surgeon that these deadly infections were of his own making, that his unclean hands, instruments, clothing and dressings were the means of transferring infections from an infected wound to a fresh one.

Dr. Leeson pictures graphically the horrors of these preantiseptic days, horrors common to all hospitals throughout the world. Then came Joseph Lister, in whose mind was born the keen inference that if germs caused putrefaction in dead animal matter, as Pasteur had shown, they probably caused suppuration in living tissues exposed and bruised by accident, surgical operation or in the process of childbirth.

About this time experiments in Glasgow proved that the odor from sewage reservoirs could be prevented by treatment with crude German creosote. Reasoning that creosote must destroy germs, Lister determined to try it as a dressing in a compound fracture of the leg. He applied it in the form of a paste made with plaster of Paris. To his surprise and delight, the wound healed with no pus formation and no constitutional disturbance.

In this incident, which occurred in May, 1866, antiseptic surgery had its birth. Of the isolation of carbolic acid (phenol) from the creosote shortly thereafter, of the invention of the atomizer to fill the air of the operating room with carbolic spray, of the meticulous care with which the ample dressings were applied and of the marvelous results effected in the healing of wounds, Dr. Leeson writes a fascinating story.

Seldom has the biblical saying that "a prophet is not without honor save in his own country" had a more striking example than in Joseph Lister. His colleagues, both in Edinburgh and later in London, were skeptical and even hostile. While surgeons from almost every other country on the globe came to be instructed in the new method of surgical and obstetric practice, his associates continued to scoff until every other national group of surgeons had become thorough converts to antisepsis and ardent devotees in its practice.

JOHN M. DODSON, M.D.

News *and* Views

From the

FIELD OF HEALTH

FALL BONFIRES ENDANGER CHILDREN

Fall bonfires of dead leaves and old newspapers from the October upheaval of house-cleaning are a source of danger to children, warns the bulletin of the Iowa department of health. Twenty children lost their lives in Iowa in 1926 as a result of playing around bonfires.

Carelessness in handling kerosene and gasoline was responsible for 50 per cent of the deaths from burns in 1926, not to mention the destruction of property.

A reduction of the number of accidents by 8 per cent of the number in the preceding year was reported.

CANADIAN OFFICIALS FIND MISLABELED FOODS

More than 10,000 samples of food and drugs were examined in the course of a year under the food and drugs laws of Canada, says a report issued by Canadian health officials.

Legislation is directed against misrepresentation of foods as well as fraudulent or dangerous adulteration.

Adulteration of butter with coconut oil was notably less than in other years. Samples of caramels were free from paraffin for the first time in several years. An import shipment of canned pineapple was found to consist of crushed cores and was held until it was properly labeled.

Thirty-nine prosecutions were instituted in cases of adulteration of meats, maple syrup, molasses, maple butter, candy and jams after it was found that the deceptions were wilful and persistent.

URGE SAFETY EDUCATION IN PUBLIC SCHOOLS

Taking cognizance of the fact that 4,500 children are killed by automobiles every year in the United States, the West Virginia department of education has recommended systematic safety instruction in the public schools. Legislation has eliminated many of the hazards to life and limb, but the constant need for intelligent understanding of safety can be met only by instruction in the schools, urges the *Educational News*.

PELLAGRA THREATENS FLOOD AREA

In anticipation of an outbreak of pellagra in the regions of the great floods, the U. S. Public Health Service has had a preliminary survey made of the conditions among the survivors. This disease, which has made its appearance in the South before when times are hard, is caused by a faulty, unbalanced diet. The three M's, meat, meal and molasses, are considered its commonest cause, according to experts.

These items, hard fat meat, corn meal and molasses, form the principal food of many people during a siege of hard times in the South. If they continue to live on such a diet, they are apt to become weak and nervous, have indigestion and an eruption that looks at first like sunburn.

Fresh lean meat, milk, cheese, green vegetables and eggs, taken regularly, are both cure and preventive of this disease. Just what factor in the unbalanced diet causes the disease is not known.

Fortunately, because of the prompt and efficient action of public health officials, no great outbreaks of infectious diseases, such as usually follow a big disaster, have occurred in the flooded area.

WRONG TRAINING CAUSES PHYSICAL DECLINE AT 30

A man should be in his prime physically at the age of 30. If he is not, it is because of a lack of balance in his physical training, declares the bulletin of the Dayton department of health.

Overtraining may strain the heart and unbalance the nerves. Undertraining is responsible for weakness of muscles and lack of development of the lungs. Dissipation undermines his resistance. One or more of these factors must be present if a man begins to look and feel old in his early thirties.

SWAT THE AUTUMN FLY

Now is the time to take action against next summer's crop of flies, declares the director of the Maryland state department of health. Each fly that buzzes into home or office or schoolroom is noticeably more persistent and insistent, now that the cool days have come. We should be equally persistent in getting rid of these leftover flies, advises Dr. Fulton.

A single fly left to breed in attic or cellar through the winter will have descendants running up into the billions by next summer. Every fly killed this fall means that much less danger to the babies next summer from intestinal diseases and that much less danger to children and adults from tuberculosis, typhoid fever and other infectious diseases.

CARELESS POSTURE MAY LEAD TO WEAK LUNGS

Modern carelessness in posture, engendered, it is charged, by the feminine craze for thinness, has its most serious result in inadequate functioning of the lungs, says the bulletin of the department of health of Dayton.

Nature intended human beings to walk and sit straight and she exacts a penalty when the desire to appear languid obscures the importance of holding the body erect.

The ordinary capacity of the lungs may be all right in the everyday life of the office worker, but unusual exertion or disease may suddenly demand a reserve. The lungs should be expanded fully and frequently with the shoulders thrown back. Bad posture is one of the chief factors in maintaining the high death rate of tuberculosis and pneumonia.

TEXAS HAS SCHOOL FOR SANITARIANS

Texas is to have its fifth short school for the training of sanitarians at Houston, November 1 to 4, under the auspices of the Texas Association of Sanitarians, the state department of health and the city of Houston. These short periods of intensive training in Texas cities were the first of their kind in the United States.

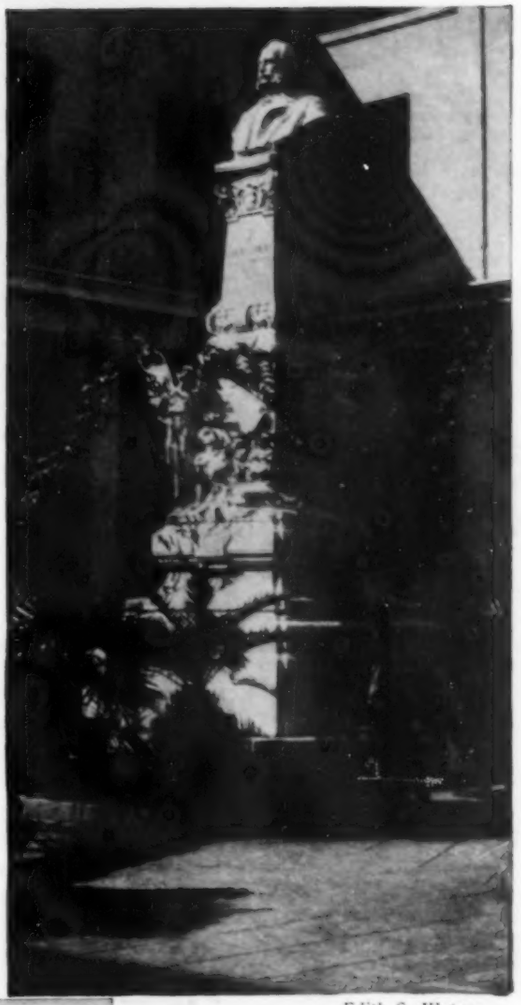
Pacific and Atlantic

PUSHBALL REQUIRES BRAWN

When the freshmen want to show how much stronger they are than the sophomores, they indulge in a fence rush or a stiff game of pushball, which is a game requiring plenty of brawn.

CUBA HONORS MAN OF SCIENCE

In the patio of the Sanidad at Havana, Cuba, stands this statue of Dr. Carlos J. Finlay, who first advanced the theory that the mosquito transmits yellow fever.



Edith S. Watson

Pacific and Atlantic

CAMPING DELUXE

The latest thing in tourist accommodations is this motor caravan now popular in England. Mounted on a standard automobile chassis equipped with regular pneumatic tires, the body is a comfortable cabin which divides into two sleeping compartments for use in inclement weather such as the tourist meets in late fall or early spring. Numerous windows provide plenty of fresh air.

TEACHING THE DEAF

Deaf children learn to talk in natural tones and inflections by feeling the rhythm of the piano and drum.

Courtesy Welfare Magazine

THEY CAN STILL DANCE

Age need be no deterrent to health or pleasure, this couple proved when they joined the younger generation in dancing at a recent old settlers' picnic in Chicago. The lady is 96, the oldest woman present at the picnic, while her partner is 81 years.

Underwood and Underwood

BLIND GIRLS DO DAILY DOZEN

Blind children follow their teacher's one-two-three-four as closely as if they saw her movements. They even learn to swim in a wire enclosed crib at this camp maintained by the New York Association for the Blind.

Pacific and Atlantic

Pacific and Atlantic

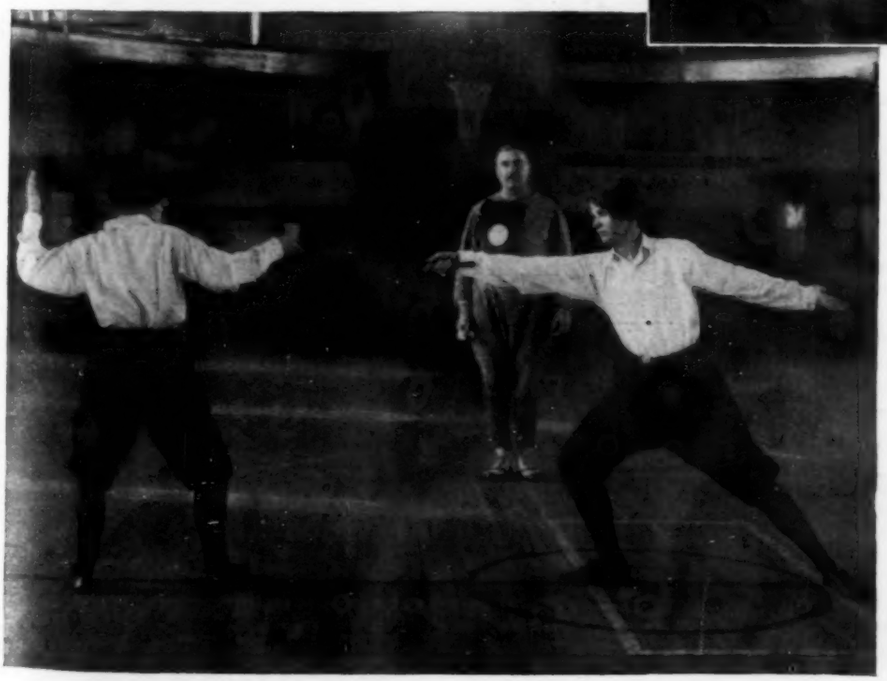
GIRLS DRILL WITH BOYS

Japanese girls who insist on going to college like their brothers must also take part in the military training given the boys at the colleges and universities.

BILLY'S TOOTH ACHES

A bad toothache taught Billy, 8 months old, that candy is not good for babies.

Pacific and Atlantic



GIRLS FENCE

Students at Mount Holyoke college acquire strength and agility through their fencing lessons.

When School Bells Call the Children in from Play

SIZE NOT AN INDEX OF MENTAL CAPACITY

Ten minutes' conversation with a freshman is a more reliable criterion of his mental capacity than measuring the proportions of his body, Dr. William H. Sheldon of the University of Chicago declares in the *Journal of Personnel Research.*

Dr. Sheldon concluded that people with small bodies were not more intelligent than those of larger frame, a theory advanced after a test made at Columbia University in 1921. After he had measured 450 students at the university and had made at the same time a personal estimate of their mentality, he checked his observations with the students' rating in intelligence tests and their college grades. The results did not show a dependable relationship of mentality to body proportions.

SCHOLARSHIPS STIMULATE HEALTH TEACHING

Last year in an effort to encourage and stimulate health teaching in the schools the Tuberculosis Society of Detroit and Wayne County offered to teachers five scholarships to cover summer courses in public health at various universities. The awards were based on outstanding health work done during the school year.

Among the interesting projects, many of which would doubtless have been carried on anyway, was the effort of one sixth grade teacher to eliminate the ordinary cold or acute respiratory infection from the large school in which she taught. The project was worked out by educating the children, but was made possible only by the cooperation of the school nurse, the examining physician and the entire corps of teachers.

In November an active campaign against colds was started among the 1,144 children enrolled. Careful records were kept by the nurse of the number of colds reported and time lost due to this cause. It was estimated that two whole years of school time were lost from this one cause. Each child studied his own condition, trying to understand why he became a victim of this infection and how it could be prevented. Among other things, it was noted that the overweight children as well as the underweights had poor resistance to colds.

Other observations were that a large number of colds were "caught" from other members of the family; that chronic colds were due to infected tonsils and adenoids and anemic condition and malnutrition; and that results of repeated colds were enlarged glands, abscesses of the ear, infected eyes, temporary deafness, sinus infection, bronchitis and influenza. The teachers and pupils became so interested in the experiment that it is being repeated this year.

A striking result of the scholarship contest, and yet a not altogether unexpected one, is that in each school in which a scholarship was won by one of the teachers, increased activity along health lines is noticeable this year.

MENTAL DISEASE IN YOUNG PEOPLE INCREASES

Mental disease in young persons is increasing, according to Dr. Menas S. Gregory, psychiatrist of Bellevue Hospital. Earlier recognition of unbalanced mental states partly accounts for the increase, Dr. Gregory said, but thwarted ambitions and desires for material luxuries demanded by the present generation also cause discontent that leads to abnormal mental and nervous conditions.

SEND SICK CHILDREN HOME FROM SCHOOL

A school that is not properly safeguarded may be a breeding place for contagious and infectious diseases simply because large numbers of children are together, warns the health commissioner of Oklahoma, as schools open for the winer term.

Even if deaths or permanent injury do not occur from epidemics, children lose time from school and perhaps their coveted promotions, the household is inconvenienced and, worst of all, younger children at home are exposed to disease.

It is better to send home several children who have nothing the matter with them than to let one remain at school with symptoms of a disease to which the whole school will be exposed.

HEALTH PROGRAM FOR HIGH SCHOOLS PROPOSED

Special attention to health education in high schools is contemplated by the National Tuberculosis Association as its next point of attack.

High school students are at a critical age from the standpoint of health, and they have been almost neglected hitherto in the teaching of health.

The health program as outlined is interdepartmental and would be carried out by a faculty health committee with the aid of a health counselor. The Pennsylvania Tuberculosis Society has recommended that Pennsylvania high schools try out the plan with the assistance and cooperation of the school authorities, as a means of learning whether it is practical, as well as making a beginning in health education for high school students.

NEW SCHOOL GRADUATES CRIPPLED CHILDREN

Buffalo's Crippled Children's School recently graduated its first class of nine children. The new building, which was especially designed to meet the needs of the handicapped children, is described in the sanitary bulletin of the Buffalo department of health.

The crippled children's school maintains standards of work equal to those of normal children, plans for the vocational future of the child and cares for his physical condition.

Busses provided by the city bring the pupils safely to school.

Questions *and* Answers

If you have a question relating to health, write to "Questions and Answers," Hygeia, enclosing a two-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed.

Blue Baby

To the Editor:—I had a little daughter born on June 10, but she lived only two days. She was a blue baby. Will you please tell me the cause of the faulty heart action that causes the baby to be a blue baby? Is it through lack of care, prenatal influence, or what? I have had four other children, all living, and all were strong, husky babies. I had to work very hard before this last baby came, on an average of three days a week at my work as a corsétière. I walked a good deal but never felt that the walking did me any injury. Would any of these things have caused my baby to be as she was?

C. A., Pennsylvania.

Answer.—The congenital heart defects that may give rise to what is known as a blue baby are the result of defects of development of which the causes are unknown. It is not likely that anything that the mother did brought on this trouble.

During the life of the infant before birth, the course of the blood stream that carries the blood from the mother to the child is different from the arrangement of the circulation after the child is born. Sometimes these changes fail to be completed and as a result there is a mingling of blood from the arteries and veins. Occasionally, when the defect is not too severe, babies live for a number of years.

Loss of Hair

To the Editor:—A man in our town recently lost all the hair on his head, his eyebrows and lashes, and his whiskers. His eyes have also been affected. What disease other than syphilis would cause this condition?

A. S., Pennsylvania.

Answer.—While syphilis is one of the causes of loss of hair, it is by no means the only one. A considerable number of conditions may have to do with loss of hair, among them heredity, severe nervous shock, traumatism, such as a blow, or after a surgical operation, infection and toxic conditions.

Whether or not an individual afflicted with this condition has syphilis could only be determined by thorough examination, including a laboratory test.

Peeling of Lips

To the Editor:—What causes the skin to peel in certain places on the lips?

A. H. Z., Wisconsin.

Answer.—Persistent exfoliation, or peeling, of the lips resembles a condition of the skin often seen on the scalp known as seborrhea. Crusts of a yellowish or darker color sometimes form. The cause is unknown, though a nervous element is often present in persons so afflicted. The x-ray and radium have been used with success in some cases.

Gonococcus

To the Editor:—How long ordinarily does a gonococcus germ live outside the human body?

F. A. S., Minnesota.

Answer.—This question cannot be answered properly because of the lack of a definition of the word ordinarily. Extremes of the viability (ability to live) of the germ are stated by different authors, but on what basis of observation and research we are unable to say.

Joseph W. Bigger in his "Handbook of Bacteriology," says: "Desiccation and exposure to sunlight or to weak disinfectants kill it (the gonococcus) rapidly. It has, however, been found to survive as long as several weeks when dried in pus in a thick layer." Edwin O. Jordan in a textbook of general bacteriology, says: "The gonococcus is sensitive to drying and under ordinary circumstances can survive exposure to the air for only a very short time, although in masses of dried pus it may live exceptionally for six or seven weeks."

In medico-legal cases this question has not been settled but it may be safely asserted that the gonococcus does not live any great length of time outside of the body.

Dermographism

To the Editor:—My skin is smooth and of a fine texture and is never subject to pimples or any form of skin eruptions, although it is not of delicate, transparent texture. However, it is abnormally sensitive, reacting to the slightest rubbing or scratching by reddening and swelling. A slap of moderate force will leave a clearly defined imprint of the hand. First, the skin reddens, then swells slowly until it rises about an eighth of an inch, somewhat like a mark in bas relief. This lasts about ten or fifteen minutes and then the skin becomes normal again. By means of a pencil or a toothpick or even my nail I can write my name on my arm. In a few minutes it swells up and then disappears.

H. T., Connecticut.

Answer.—This is a classic description of the phenomenon known as dermographism. The condition is due to an excessive irritability of the skin. It is often associated with hives, but may occur independently. Like chronic hives it may be an expression of a chronic poisoning. Infection in the body and disturbances of digestion must be ruled out by the physician. However, in many instances no discoverable cause can be located and the symptoms must be treated as they occur.

As a general measure acid foods and articles that are usually indigestible should be omitted from the diet.

Sinusitis

To the Editor:—I am suffering from daily attacks of headache. This is accompanied by a constant cold in the nose. After an examination, including x-ray, I was told that I have sinusitis. A physician is treating me twice weekly with argyrol. Would you kindly tell me what sinusitis is and what, if anything, can this treatment do for it? I have had more than twenty-five treatments and feel no relief.

R. R., Pennsylvania.

Answer.—Sinusitis is an inflammation of one of the sinuses communicating with the nose. The two largest sinuses are located in the upper jaw bone. Another is in the center of the forehead just above

and between the eyes. Still others more deeply seated are directly back of the nose. It is most important that there should be free drainage of the discharge that accumulates in inflamed sinuses.

In the absence of a personal examination and study of the case, it is impossible to give an opinion as to whether the treatment being taken is the best for the case.

Prostate Hypertrophy

To the Editor:—Is there anything known to medical science for treatment and cure of prostate hypertrophy other than a surgical operation? Has diet anything to do with it? I am 62 years old and have been troubled with this condition for the last seven years.

T. H. A., Ohio.

Answer.—A number of conditions at the neck of the bladder cause obstruction and may produce the same symptoms as hypertrophy of the prostate gland. One of these is infection of the gland; this may be relieved by nonsurgical methods. However, when true hypertrophy exists, some form of surgical operation is practically always necessary for relief.

Grain Itch or Straw Itch

To the Editor:—In July I cut grass on a very hot day and became overheated. The next day I spent on a farm. When I came home there were red marks all over my body, and the irritation was so great I could not sleep at night. I went to see a physician, who called the condition grain itch. He gave me salve which after a time stopped the irritation but my body remained covered with brown spots. Then he gave me medicine for my blood. It is not on my face, hands or feet, but the rest of my body looks terrible. At college I play on the basketball team and sometimes when I am overheated it feels as if pins and needles were being stuck into me.

N. S., Pennsylvania.

Answer.—Grain itch, or straw itch, is not of infrequent occurrence, and was first described in this country by Schamberg of Philadelphia in 1901. It is produced by a mite, termed *Pediculoides ventriculosus,* which is found most commonly in straw. The disease may occur in epidemic form usually between the months of May and October. Several members of a household or groups of laborers or sailors may be simultaneously attacked. The organisms have been found in the dust and siftings from straw.

A description of the disease, including the symptoms, diagnosis and treatment is to be found in the standard textbooks on diseases of the skin. Whether or not the condition described in the letter is grain itch cannot be told without a personal examination.

Advertising Physicians

To the Editor:—I am enclosing an ad of an M.D. Would it be advisable to go to him for treatment? L. S., Kentucky.

Answer.—It is unwise to consult an advertising doctor. No reputable physician ever makes claims such as are made in the advertisement enclosed.

Water Closet Near Well

To the Editor:—In a locality in which the land is practically level and the wells are from 12 to 20 feet deep, how near to a well of water used for drinking purposes could a pit water closet be placed? If this pit is used for a year or more, or until it is full, then discontinued, and the pit covered over with earth, how long before its contents would become harmless so as not to endanger water for drinking should a well be placed near it?

R. T. D., Virginia.

Answer.—Several factors determine what is a safe distance between a water closet and a shallow well. In general, it may be said that the well and the water closet should not be closer than 150 feet. The factors that might alter this distance are the level of ground water, the direction of flow of the ground water, rainfall and character of the soil.

When the ground water level is high, there is more chance of spread of intestinal bacteria. If the flow of underground water is toward the well from the water-closet, pollution may be carried for a considerable distance. At times of heavy rainfall, the material is, of course, more rapidly spread than during the dry season. On the other hand, during droughts wells may draw from more extended underground areas.

Certain soils allow water to percolate through rapidly. Probably the safest type of soil is a mixture of loam and sand. When beds of clay exist water will pass rapidly along the surface of these beds. It does not, however, percolate through to any degree. In limestone regions there are likely to be fissures through which the water may pass without any purification.

It is possible, at times, to determine connections between wells and water closets. This may be done by adding a large amount of salt to the water closet, flushing it with water and then analyzing the well water for increase in salt content. A more practical method is the addition of a dye such as fluorescein and the examination of the well water in a glass vessel to determine whether or not the dye has passed to the well.

Some studies have been made on the viability (ability to live) of the typhoid bacillus in stored fecal material. Jordan has found that some typhoid organisms may survive for nearly two months. It is not safe to assume that the contents of a water closet are harmless except after long periods of time.

Twilight Sleep

To the Editor:—What is the present opinion in medical circles relative to twilight sleep? I have been informed by other people that many doctors consider the after effects of twilight sleep detrimental to both mother and child. Will you please advise in some detail just what are the advantages and more particularly the disadvantages of this form of treatment. D. M., California.

Answer.—Few physicians are trying to obtain amnesia or forgetfulness, which was originally attempted in the so-called twilight sleep. Many obstetricians use the drugs in reduced amounts, only aiming to relieve pain; then at the time of delivery they give an inhalation anesthetic, such as nitrous oxide-oxygen, ethylene or ether. There is no objection to the modified method now in use.

As a general rule the patient should leave the relief of pain to the judgment of the obstetrician.

Chronic Laryngitis

To the Editor:—What are the most common diseases that affect the voice? Will chronic laryngitis so impair the voice as to render public speaking impossible? What other troubles are likely to attack the voice of a public speaker? Can vocal troubles generally be cured? T. S., Ohio.

Answer.—The voice may be affected either by local diseases in the upper respiratory tract or by those that affect the whole system. Among the former are the so-called head colds that begin in the nose and extend down to the throat to the voice box, or larynx, and to the windpipe, or trachea.

Infections of the nasal sinuses, the cavities of the skull that communicate with the nose, accompanied by the formation of pus, often involve the vocal cords because the pus may drop from the nose to the throat and down into the windpipe and bronchial tubes. Systemic conditions, such as tuberculosis, especially of the lungs, often affect the larynx. In certain occupations, the inhalation of irri-

tating dust or chemicals is likely to affect the voice.

One of the most common causes of a change in character of the voice is the improper use of it, such as very loud speaking, especially in open or in noisy or dusty places.

Chronic laryngitis may impair the voice to such an extent that public speaking becomes difficult or practically impossible. A public speaker should be cautious in the use of tobacco, especially its inhalation, and in the use of highly spiced foods, alcohol and other irritating substances.

The cure of vocal troubles depends largely on the cause. In many instances, if no severe or marked damage has been done to the vocal apparatus, the careful use of the voice and the avoidance of the irritants mentioned will aid in restoring the proper voice.

If there are any special defects of speech, training by one skilled in this work frequently brings gratifying results. In those cases, however, in which there has been ulceration, destruction or marked thickening in various parts of the larynx as a result of some of the conditions already mentioned, the complete restoration of a normal voice is almost impossible.

In order to judge the nature and degree of the change of the voice and of the larynx, it is necessary to have a competent specialist determine the nature of the trouble and advise as to treatment.

Lumbago; White Flour

To the Editor:—1. What can be done to relieve or cure an attack of lumbago? What can be done to prevent a recurrence of this trouble? Would chiropractic adjustment be beneficial? 2. Why is flour bleached? Does this make it better as a food?

C. O. M., New Mexico.

Answer.—1. Lumbago, or pain in the lower region of the back, is usually due to rheumatism of the muscles in the lumbar region. It is best cured by rest, the application of heat, restricted diet and, when indicated, by suitable drugs. Chiropractic adjustment is the last thing to be thought of. It might aggravate the pain; it most certainly would not be likely to cure it.

2. Flour is bleached because many people like the appearance of white bread. It does not make it better as a food. Indeed, if one were living on bread alone, the portion of the grain that is removed in making so-called patent flour, which is white, would be a serious loss, as both the germ and the outer covering of the wheat, which are removed in the process, contain important vitamins. When a mixed diet is used, these are supplied by other foods and the matter is not of great importance.

Sanitary Diaper

To the Editor:—Can you give me information as to where I can get a prepared diaper or diaper pad that is easily destroyed? We are starting by train to California the last of this month and I thought if it were possible to secure such a thing it would do away with the unpleasant and insanitary packing of damp diapers. My boy is 10 months old, so they would need to be of fairly good size.

B. W. B., Indiana.

Answer.—Inquiry of a manufacturer of children's wear, of an infant welfare organization and also of a large department store that deals extensively in infant wear discloses the fact that there is no satisfactory diaper of paper or other destructible material. There is a sanitary diaper made of paper material to be placed inside of the cloth diaper, but its principal purpose is to prevent the soiling of the cloth diaper with the bowel discharges. It is not adequate to absorb the urine.

Renal Calculi

To the Editor:—Can you advise me whether there has been any noteworthy research done on the relation between various foods and the formation of renal calculi? Surgeons discuss only the surgical aspect of the condition. I am far more interested (and I am sure hundreds of other persons must be, too) in the fundamental causes and conditions leading to the formation of renal calculi.

H. L. S., New Jersey.

Answer.—Neither the cause nor the mechanism of formation of urinary stones is clearly understood. Experimental work has emphasized four factors.

First, if the supply of mineral salts to be excreted is large, stones may form. This was demonstrated by causing rabbits to excrete excessive quantities of calcium oxalate. It is doubtful if this factor is important in the average case in man.

Second, a number of the older investigators suggested that a blockade in the pelvis of the kidney or along the ureters would slow the urinary stream, favor the deposition of the salts and result in calculus formation. More recently (1918) Hunner, who has described so completely the symptoms of ureteral stricture, has published studies emphasizing this factor.

In the third place, Keyser has shown that there may be at times significant changes in the material, secreted by the kidneys, which assists in the solution of the urinary minerals. If this material becomes abnormal in character the mineral constituents may clump together and form stones rather than remain dispersed. Infections planted at the base of teeth in dogs (Rosenow) have caused the formation of stones, presumably through this mechanism. Similar changes have been produced in rabbits' urine by the injection of cultures of organisms isolated from tonsils of patients having kidney stones.

Finally Mendel and Osborne (1917) and Fugimaki (1926) have shown that animals fed on a diet deficient in vitamin A develop stones in the kidney, urinary bladder, ureters and gallbladder. Fugimaki asserts that if the animal that has on this deficient diet developed a stone, as proved by x-ray examination, is again fed adequate quantities of cream, butter, cod liver oil and other foods rich in vitamin A, the stones disappear.

Hence, in the light of the present knowledge of stone formation, the following preventive steps should be taken: (1) All strictures in the ureters should be dilated slowly to a size adequate to insure urinary drainage; (2) any foci of chronic infection, as infected teeth and tonsils or possibly a bad gallbladder, should be removed; (3) foods rich in vitamin A should be eaten.

Pin-Worms

To the Editor:—I have been troubled with pin-worms for more than three years. I have followed the instruction of different physicians and, when their treatment failed, I took a patent medicine. One physician told me to boil quassia chips, mix in a little camphor, and use this as an injection each morning. I did this for six months, but secured only temporary relief. I am rather stout; I weigh 145 pounds, am 22 years old, and have a good appetite. The only way in which I am annoyed by these worms is by an itching at the rectum.

L. A. L., New Jersey.

Answer.—The itching, which seems to be this patient's chief complaint, may not still be caused by pin-worms. Itching about the anus may be due to a number of other causes. The only proof that worms still remain is to see them.

The treatment by an infusion of quassia chips, which has been tried, is the standard remedy for this condition, and it seems difficult to believe that if this treatment was used for six months the parasites would still be present. They do sometimes remain in the upper portion of the large intestine and are then difficult to get rid of, although persistent treatment by the quassia injections should banish them completely.

Tantrums

To the Editor:—My girl baby, 2 years old, goes into a tantrum every time I put her in her bed for her morning nap or at 7 at night. I had a real struggle with her when she was 10 months old. Then, her tantrum (or fear, whichever it may be) was mistaken for teething troubles. When I discovered this mistake, I immediately took steps to "unspoil" her. It lasted for three awful evenings. The first night she cried for two hours. After the third night she was completely cured. We were in Florida for the winter. While there, she contracted malaria and was more or less spoiled as a result. However, this soon vanished. Some time after, she was awakened in the night by lightning and thunder. She was terrified and clung to me. I took her from her bed into my room where she slept until morning. Ever since then she has screamed as though in fear every time I put her in bed. After a few days, I thought she must associate thunder and fear with that room, so we moved her bed into another room. This made no difference whatever. Of course I walk out of the room as soon as I put her down. If I stayed there, she would be perfectly quiet. I hope she is not a particularly nervous child, although I suppose she is. Articles out of place irritate her. If I don't don my bathrobe the first thing in the morning, she will cry hard and point to it.

N. B. B., New York.

Answer.—The difficulty with this child seems to be due to two causes:

First, perhaps the mother is a little too nervous and anxious about the child. It has been found that the attitude of the parent, even though unspoken, communicates itself to the infant. Anxiety on the part of the mother results in a feeling of insecurity in the child. On the basis of this insecurity, fears are likely to develop.

Second, the child seems to be overroutinized. It is easy, in an effort to be systematic in the training of a child, to overdo the routine. The fact that the child wants everything in place and cries if the mother does not put on her bathrobe as usual every morning seems to indicate this condition. This anxiety on the part of the child about things out of place is more indicative of something wrong in the routine than are the tantrums.

The actual tantrums are not caused by the child's associating lightning and thunder with the room, but are probably caused by her associating lightning and thunder with being alone. There is probably a conditioned response of fear, arising when the child is alone and not because she is in some particular room. The mother might try remaining with the child for a short time when she goes to bed and telling her a pleasant story, getting her in a quiet, pleasant frame of mind before she is left alone.

The mother should also take occasion once during the day to praise the child for the fact that she has slept well the night before and was not afraid to be in the room alone.

The tantrums should never be mentioned in the child's presence. It is possible that the child may be having these spells in order to get some attention.

Behavior problems in children are not caused by some great mistake. They arise from unwise handling in the daily routine of the child. The taking of food, dressing, taking a bath, going to bed, the attitude of the parent, the tone of voice used, the way in which commands are given, all these are decisive factors in determining the behavior of the child. Another point to be considered is that a behavior problem has many causes. It is rare to find a single cause back of a behavior problem.

The mother should not have too rigid a routine for the child. She should not try to rear her by a book, but to give her as much freedom as possible. If it is possible, the child should be placed in a nursery school for reeducation.

Nephritis

To the Editor:—A doctor said the only thing that would cure nephritis was bananas. Is this true or just talk?

E. R. P., Louisiana.

Answer.—There is no basis for the statement that bananas will cure nephritis.

Swelling of Foot; Backache

To the Editor:—1. What could cause the swelling of the right foot? 2. Would chiropractic treatment be good in a case of constant backache?

E. H., Alabama.

Answer.—1. Swelling of a foot, when it is confined to one side, is due to pressure somewhere along the course of the blood vessels that convey the blood away from the foot. A tumor that produces pressure or an inflammation deposit somewhere in the leg or pelvis is the most probable cause.

2. Chiropractic treatment is utterly without merit for the cure of backache or anything else. The theory that alleged misplacement of the bones of the spinal column is responsible for most of the ailments is without scientific foundation.

Rubbing the back sometimes gives temporary relief to backache, but a good masseur can do this much more skilfully and with much less danger of doing harm than a so-called chiropractor.

Citric Acid

To the Editor:—Does a solution of citric acid lack the desired salts and vitamins of lemon juice? Will it serve as a mild alkalinizing agent as does lemon juice?

D. E. S., Illinois.

Answer.—Citric acid lacks the desired salts of lemon juice and cannot be used as an alkalinizing agent in the place of lemon juice. Lemon juice contains not only citric acid as such but also salts thereof and salts of other organic acids.

Citric acid contains little or none of the vitamins of lemon juice. Cruder forms of citric acid, such as are obtained from drug houses, may contain traces of the vitamins but certainly not to the same extent as the fresh lemon juice.

Tuberculosis Hygiene

To the Editor:—Is it necessary to sterilize dishes used by a person with an arrested case of tuberculosis? Is it permissable for a person with an arrested case of tuberculosis to kiss relatives and friends, even when the kissing is done on the cheek?

S. W., Arkansas.

Answer.—If one were perfectly certain that a case of tuberculosis had been completely arrested and that bacilli were not being discharged in the sputum, there would be no danger of that disease being transferred from dishes. However, the wise plan is to disinfect by boiling water all dishes used by any person.

A person who has had tuberculosis ought not to kiss another. For that matter no one can ever be quite sure that he may not harbor some organism in nose and throat that might be dangerous to others.

Fresh Air

To the Editor:—Is the effect of the fresh air the same if I am sitting at the open window in my apartment as if I am sitting in the park?

E. T., New York.

Answer.—If there is free movement of air in a room in which one is sitting, and a constant influx of outside air, it is the best possible substitute for sitting in the open. There is great advantage, however, in being unsurrounded by walls or roof and getting the full benefit of the sunshine as well as of the constantly moving fresh air.